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DESCRIPTION OF THE CITY OF PEKING.

PEKING, the capital of the Chinese empire, stands on a vast plain, in the interior of Chih-le, (or Pih-chih-le), the most northern province of China Proper. It is situated in latitude $39^{\circ} 55'$ north, and in longitude $116^{\circ} 45'$ east from Greenwich, and about $3^{\circ} 30'$ east of Canton. On the east and south, the low and sandy plain extends farther than the eye can reach; on the west and north, hills begin to rise above the plain only a few miles from the walls of the city; and at a distance beyond, the prospect is bounded by mountains which separate the province of Chih-le from Mantchou. Viewed from the summit of those mountains, the city appears as if situated in the midst of a thick forest; this effect is produced by the clusters of trees that cover the villages, temples, and numerous cemeteries which encompass the capital. From the great wall, which passes along upon this ridge of mountains, Peking is about fifty or sixty miles distant; and a little more than a hundred from the gulph of Chih-le. The Pih-ho, rising in the north beyond the great wall, flows within twelve miles of the city on the east, and then passes down in a south-east direction by Teen-tsin into the sea. Several smaller rivers, issuing from the mountains on

the north-west, water a part of the plain; and one of them, which is called the Tung-hwuy, descends to the city and supplies its numerous canals and tanks; it then flows eastward, and uniting with one of the larger rivers forms an extensive water communication by which provisions are conveyed to the capital.

Peking, or *Pih-king* 'the northern capital,' is regarded by the Chinese as one of their most ancient cities; its early history, however, is involved in obscurity. The imperial court has been repeatedly removed from one province to another, having been held in Shen-se, Ho-nan, and in other more southern provinces. The first monarch of the Yuen dynasty, who ascended the throne in A. D. 1279, kept his court for several years at the capital of Shan-se; but subsequently removed it to *Shun-teen-foo*, the principal department of the province of Chih-le, and the present site of Peking. Hung-woo, the first emperor of the Ming family, established the seat of his government at Keang-ning-foo, the principal department of the province of Keang-nan, and hence styled *Nan-king*, 'the southern capital;' but Yung-lo, the third monarch of the same line, removed it to Peking, where it has remained to the present time. On native maps the city is not usually denominated Pih-king, but *King-sze*, 'the residence of the court.' Since the foundations of the city were first laid, it has undergone many changes in its extent and form. For a long period it was surrounded only by a single wall, and had nine gates; and hence, even to the present day, it is sometimes spoken of as 'the city of nine gates.' At a later period it was extended towards the south by a new wall, leaving the former southern wall between the old and the new city. At the present time, the northern division is called *nuy-ching*, 'the inner city,' and the southern, *wae-ching* 'the outer city;' and as in the case of Canton, the northern part is frequently denominated the Tartar city. The new wall which surrounds the outer city, or southern division of Peking, has seven gates.

The northern division of the city is nearly in the

form of a parallelogram, of which the four sides face the four cardinal points; it extends from north to south about four miles, and from east to west three, having an area of twelve square miles. The southern division extends from east to west nearly six miles, and two and a half from north to south, occupying an area of about fifteen miles. Thus the entire circumference of Peking may be estimated at nearly twenty-five miles, and its area at twenty-seven square miles.

The walls of the northern division of the city, according to Barrow, are thirty feet in height, twenty-five feet in breadth at the base, and twelve at the top. The inclination is chiefly on the inner side; the outer side is smooth and nearly perpendicular. Near the gates, the walls are faced with marble or granite, but in other places with large bricks laid in mortar which is made of lime and clay, and "in process of time becomes almost as hard and durable as granite." The intermediate space between the inner and outer surfaces of the wall is filled with the earth and clay that was dug from the ditch which surrounds the city. On the outer side of the walls, square towers, projecting about fifty feet from the line of the wall and of the same height with it, are built at the distance of about sixty yards from each other. Two such towers, of equal height with the walls, stand one on each side of every gate, and are connected in front by a semicircular fort. The arches of the gates are strong, being built of stone; they are surmounted by large wooden buildings, several stories high. On the inside of the wall, at the side of every gate, also near the middle of the interval between the gates, and at the several corners of the city, there is a species of esplanade for ascending to the top of the wall. A ditch surrounds the whole city, which is supplied from the waters of the Tung-hwuy river: with this ditch others are connected, by which the same waters are conducted to all the principal parts of this great metropolis.

To the stranger approaching the city of Peking, its lofty walls and towers give it an imposing appearance, not unworthy the capital of a great empire; but when he comes within the walls, his admiration is turned to surprise. He beholds there none of those beautiful and superb edifices, none of those neat and elegant streets, which are the principal ornament of European cities; instead of these, he sees in various directions irregular assemblages of houses, shops and temples. The style of the architecture, and the general appearance of the buildings, is the same as in Canton. Most of the streets are indeed sufficiently wide and straight; but they are not paved, and, in general, their bad condition is a just subject of complaint, in this as well as in other Chinese cities. As, however, the front of every shop in the business streets, has an arrangement peculiar to itself, and before it, on either side, a perpendicular sign-board as high as the roof, covered with inscriptions in large gilt or painted letters, describing the wares within and the reputation of the dealer, and often hung from top to bottom with flags and ribbons; this diversity in the arrangement of merchandise, together with the profusion of gaudy decorations and the bustling crowd by which he is surrounded, divert the attention of the spectator, and cause him to forget in some degree the more disagreeable parts of the scenery around him.

The smaller streets are quiet and free from crowds; but those which lead to the principal gates are constantly thronged with people. The following description by an eye-witness will serve to convey some idea of the scene they often exhibit. "The multitude of moveable workshops of tinkers and barbers, cobblers and blacksmiths; the tents and booths where tea and fruit and rice and other vegetables were exposed for sale; with the wares and merchandise arranged before the doors of the shops, contracted the spacious street to a narrow road in the middle. The processions of men in office attended by their

numerous retinues bearing umbrellas and flags, painted lanterns and a variety of large insignia of their rank and station; trains accompanying, with lamentable cries, corpses to their graves, and others conducting brides to their husbands with squalling music; the troops of dromedaries laden with coal from Tartary; the wheel-barrows and hand-carts loaded with vegetables; occupied nearly the whole of this middle space. All was in motion; the sides of the streets were filled with people buying and selling and bartering their different commodities. The buzz and confused noises of this mixed multitude, proceeding from the loud bawling of those who were crying their wares, the wrangling of others, and the mirth and laughter which prevailed in every group, could scarcely be exceeded. Pedlars with their packs, and jugglers, and conjurers, and fortune-tellers, mountebanks and quack doctors, comedians and musicians, left no space unoccupied." Such, according to Mr. Barrow, is the scene exhibited in a street in Peking. The crowd of people, and the variety of strange sights and sounds on the occasion described, was probably rather greater than usual; but he has given too correct a representation of what may sometimes be witnessed even in the suburbs of Canton, to allow us to accuse him of much exaggeration.

Soon after the present dynasty took possession of the throne of China, in 1644, the government, designing to occupy the northern division of the city as barracks for its troops, purchased the houses of the private owners and gave them to the Tartars who had served in its wars; but these brave soldiers, less skilled in the arts of peace than the people they had subjugated, were very soon obliged to sell them to the Chinese. In consequence of this, all the principal and many of the smaller streets, with the exception of those near the imperial palace, are owned and occupied by Chinese; and the Tartar soldiers have been compelled to take up their abode in the lanes and alleys near the walls of the city. Thus far we

have spoken of the capital as a whole; we now proceed to survey its principal parts.

The northern division of Peking consists of three inclosures one within another, each surrounded by its own wall. The first contains the imperial palace and the abodes of the different members of the imperial household; the second was originally designed for the residence of the officers and attendants of the court, but is now occupied in part by Chinese merchants; the third consists of the remaining space inclosed by the outer walls, which have already been described.

The first inclosure, which is called *the forbidden city*, being the seat of 'the dragon's throne,' the place from which emanates the authority that governs one-third of mankind, is the most splendid, as well as the most important part of Peking. According to the notions of a Chinese, all within its walls is gold and silver. "He will tell you," says Mr. Barrow, "of gold and silver pillars, gold and silver roofs, and gold and silver vases, in which swim gold and silver fishes."

It is situated nearly in the centre of the northern division of the city. It is an oblong parallelogram about two miles in circumference, and enclosed by a wall of nearly the same height and thickness as that of the outer wall of the capital. This wall is built of polished red brick, and surrounded by a broad ditch lined with hewn stone, and covered with varnished tiles of a brilliant yellow, which give it the appearance, especially when seen under the rays of the sun, of being covered with a roof of gold. On each of the four sides is a gate consisting of three arcades or avenues, surmounted by a tower. A tower also stands at each corner of the wall. The interior of this inclosure is occupied by "a suite of court yards and apartments which seem to vie with each other in beauty and splendor." The terraces and glacis are covered with large bricks, and the walks that lead to the great halls are formed of large slabs of gray and

white stone. It is divided into three parts, the eastern, middle, and western. The middle division contains the imperial buildings, which are subdivided into several distinct palaces, each having its particular name and destination. "There reigns," says father Hyacinth, "among the buildings of the forbidden city, a perfect symmetry both in the form and height of the several edifices and in their relative position, indicating that they were built upon a regular and harmonious plan." We will notice a few of the most remarkable objects it contains, beginning at the southern part of the middle division.

1. *Woo-mun*, 'the meridian gate.' Before this gate, on the east, is a lunar, and on the west, a solar dial, and in the tower above it a large bell and gong. Public officers of both the civil and military departments, enter and leave the palace by the eastern avenue; none but the princes of imperial blood, are permitted to pass the western, and no one but the emperor the southern avenue. Whenever he goes out or returns through it, the bell is rung and the gong struck. When his troops return in triumph from war and come to present their captives, the emperor places himself here to perform the ceremony of receiving the prisoners. Here also, are distributed the presents which the emperor makes to foreign princes and their ambassadors, as well as to his own vassals. After passing this gate the visitor enters a large court, through which runs a small canal, over which are five bridges adorned with balustrades, pillars, steps, and figures of lions and other sculptures, all of fine marble. He next enters a beautiful court terminated on the right and left by gates, porticoes, and galleries adorned with balconies supported on pillars.

2. *Tac-ho mun*, 'the gate of extensive peace.' This has five avenues, and in other respects resembles the *woo-mun*, or meridian gate; it is a superb building of fine white marble. The height of the basement is twenty feet and of the whole edifice,

according to father Hyacinth, one hundred and ten. The ascent to it is by five flights of forty-two steps each, bordered with balustrades, and ornamented with tripods and other figures in bronze. The central flight is very broad, and is reserved for the emperor alone; princes and officers of the first rank enter by the two next, and inferior officers by the others. Here the emperor, on the first day of the year, on the anniversary of his birth and several other occasions, receives the congratulations and respects of his officers, who prostrate themselves to the earth before him and strike the ground with their foreheads.

3. *Chung-ho teen*, 'the hall of perfect peace.' This is the hall of audience where the emperor comes to examine the implements prepared for the annual ceremony of ploughing; and where also the genealogical tablets of his ancestors are presented to him.

4. *Paou-ho teen*, 'the hall of secure peace.' In this the emperor gives a banquet to his foreign guests on new year's day; and the authors of the biography of his deceased father come in pompous ceremony to this hall to present to him their work. After ascending three flights of steps, and passing another gate, the *keen tsing mun*, the visitor sees before him

5. *Keen tsing kung*, 'the tranquil palace of heaven,' i. e. of the emperor. This is a private retreat, to which no one can approach without special permission. To this palace the emperor repairs whenever he wishes to deliberate with his ministers upon affairs of state, or to see those who present themselves as candidates for office or for advancement. It is described by Timkowski as "the loftiest, richest, and most magnificent of all the palaces. In the court before it is a small tower of gilt copper, adorned with a great number of figures which are beautifully executed. On each side of the tower is a large vessel likewise of gilt copper, in which incense is burnt day and night. It was in this palace that Kang-he, in the fiftieth year of his reign, instituted a grand

festival, to which every individual, whose age exceeded sixty years, whether a civil or military officer, or a private citizen, was invited. Tents were erected in the front of the palace, and tables spread for many thousands. The sons and grandsons of the emperor themselves waited upon the guests. At the end of this generous entertainment, presents were distributed adapted to the condition and rank of those to whom they were given. Keen-lung also, in the fiftieth year of his reign made a similar feast. The number of guests was twice as great as on the former occasion. Those whose age exceeded ninety years were admitted to the table of the emperor, who addressed them with kindness and afterwards bestowed on them magnificent presents.

6. *Keaou-tae teen*: this hall resembles in many respects the *chung-ho teen*; it contains twenty-five of the emperor's seals; ten others are kept at Moukden.

7. *Kwan ning kung*, 'the palace of earth's repose,' i. e. of the empress, is the usual abode of 'heaven's consort.' This opinion, that *keen* and *kwan*, the emperor and empress, are heaven and earth, is a favorite dogma of the reigning dynasty, and is sedulously inculcated in its state papers.—Beyond this palace stands the

8. *Kwan ning mun*, 'the gate to earth's repose,' which admits the visitor to the

9. *Yu hwa yuen*, 'imperial flower garden.' This is laid out into beautiful walks designed for the use of her majesty, who, being of Tartar origin, is not deprived of this pleasure, as are the Chinese ladies, by being crippled with small feet. The gardens are filled with elegant pavilions, temples and groves, and interspersed with canals, fountains, lakes, and beds of flowers. Two groves, rising from the bosom of small lakes, and another crowning the summit of an artificial mountain of rugged rocks, add much to the beauty of the scene. At the east of this mountain is a library, *said* to contain a complete collection of all books published in the empire.

10. *Shin-woo mun*; this gate stands beyond the imperial flower garden, and forms the northern entrance to the forbidden city. We have now completed our survey of the central division of the *kin ching*; the eastern contains fewer objects of interest.

11. *Nuy-ko*, 'the council chamber.' This term, *nuy-ko*, is used to denote not only the cabinet of the emperor, but also the hall in which that body holds its sessions. It is situated near the southern wall; and beyond it, towards the east, is the *nuy-koo*, the imperial treasury.

12. *Chuen-sin teen*, 'the hall of intense mental exercises.' It is situated at some distance northward from the *nuy-ko*. Offerings are brought and sacrifices presented here to "the deceased teacher," Confucius, and likewise to other ancient sages.

13. *Wan-yuen ko*, the imperial library, or, more literally, 'the hall containing the literary abyss:' this is situated near the *chuen-sin teen*, and consists of several buildings and suites of rooms, which, containing a large compilation of the national literature, *Sze koo tseuen shoo*, 'the complete books of the four treasuries' (or libraries), presents the largest and most complete literary collection in the empire. Farther north, in this division of the prohibited city, are situated several imperial buildings and the palaces of princes: and also

14. *Fung-seen teen*, a temple to which the emperor comes to "bless his ancestors," whose names are written on tablets deposited here. Before the day when any great sacrifice is to be offered, and when he is about to leave the city, as well as when he returns, the emperor pays a visit to this temple: likewise, at the commencement of each of the four seasons of the year, and on the first and fifteenth days of every month, offerings are here presented, and during each day are thrice repeated.—In the western division of the prohibited city, beginning again at the south, we notice only a few of the principal objects.

15. *Nan-heun teen*; this hall stands near the

southern wall, and in it are collected the portraits of the sovereigns of preceding dynasties, and likewise tablets, and broad rolls, containing the portraits of eminent scholars and sages; these are arranged according to the degree of merit attributed to each.

16. *Woo-ying teen*; this hall contains his majesty's printing establishment; it has a bindery and buildings in which the blocks used in printing are preserved.

17. *Nuy woo foo*; here are held the sessions of a court of commissioners, or controllers, which "has among its prerogatives the regulation of receipts and expenditures of the court, its sacrifices and feasts, rewards and punishments, and all that relates to the instruction of its younger members, &c. This establishment, together with the principal magazines of the crown, which are under its superintendance, is situated near the wall on the west side of the city.

18. *Ching hwang meau*, 'the temple of the guardian deity of the city,' which stands at the north-west corner of this inclosure. In the north-eastern part of the same division, are six palaces which are occupied by the females of the emperor; they are situated like those designed for the residence of the princes, in the eastern division.

We have now completed our brief survey of the prohibited city, which is regarded by the Chinese as the most sacred and awful of places. In their estimation it is also the most magnificent. The glittering yellow and various ornaments of the roofs of its palaces and other edifices, and the brilliant colors and abundant gilding applied to the interior, give it, in their eyes, a dazzling glory; but were we to seek in it for convenience of construction, or for much that can seem elegant or grand to one whose taste has been formed according to any of the rules of architecture adopted by the people of the west, we should doubtless meet with disappointment.

(To be continued.)

MISCELLANIES.

CHINESE WEIGHTS AND MEASURES.—The frequent mention of Chinese weights and measures, in the pages of the Repository, renders a brief description of them desirable, especially to those of our distant readers who may not be familiar with the terms in use among this people.

The Chinese weigh all articles that are bought and sold that are weighable; as money, wood, vegetables, liquids, &c. This renders their dealings simpler than those of other nations who buy and sell commodities with more reference to the articles themselves. Their divisions of weights and measures, are into *money* and *commercial weights*, and *long, land measures*, &c.

I. MONEY WEIGHTS.

The circulating medium between foreigners and the Chinese is broken Spanish dollars, the value of which are usually computed by weight. Dollars bearing the stamp of Ferdinand have usually borne a premium of 1 to $1\frac{1}{2}$ per cent., while those of Carolus have risen as high as 7 or 8 per cent., but are subject to a considerable variation, according to the season and different times of the season. Those coins bearing the stamp of the letter G, are not received by the Chinese except at a discount. Mexican and United States' dollars do not pass among the Chinese, but are taken *at par* by foreigners. Every individual coin has the mark of the person through whose hands it passes stamped upon it; and as the number of these marks soon become very numerous, the coin is quickly broken in pieces, and this process of stamping being continually repeated, the fragments gradually become very small. The highest weight used in reckoning money is the *tael* (leang), which is divided into *mace* (tseen), *candareens* (fun), and *cash* (le). The relative value of these terms, both among the Chinese and in foreign money, can be seen by the following table. It should be observed here that these terms, *taels*, *mace*, *candareens*, *cash*,—*peculs* and *catties*, *covids* and *punts*, etc., are not Chinese words and are never used by the Chinese among themselves; and why foreigners have employed them instead of the legitimate terms it is difficult to conjecture.

Tael.	Mace.	Cand.	Cash.	Ounce tr.	Gr. tr.	Sterg.	Dollars.
1	10	100	1000	1.208	579.84	6s. 8d.	1,389 a 1,398
	1	10	100		57.984	8d.	.138 a .139
		1	10		5.7984	,8d.	

The value here given for the tael, in sterling money and dollars, is not the exact value; and it is difficult to ascertain it, owing to

the ignorance of the Chinese of such money among other nations. The value given to the tael in sterling money is that which is found on the books of the East India Company: that given to the dollar is the extremes of its value, as different transactions have a different estimate for its value.

The only coin of the Chinese is called *cash* (or *le*), which is made of 6 parts of copper and 4 of lead. The coins are thin and circular, and nearly an inch in diameter, having a square hole in the center for the convenience of tying them together, with a raised edge both around the outside and the hole. Those now in use have the name of the emperor stamped upon them in whose reign they were cast. Notwithstanding their little value they are much adulterated with spelter; yet on account of their convenience in paying small sums and for common use, they generally bear a premium, and but \$50 can commonly be obtained for a tael. The use of silver coin, however, appears to be increasing among the Chinese, as by recent accounts we learn that silver dollars have been made in Fuh-keen and other places, contrary to the laws of the empire.

Bullion is rated by its fineness, which is expressed by dividing the weight into a hundred parts, called touches. If gold is said to be 94 or 98 touch, it is known to have 6 or 2 parts of alloy; the remainder is pure metal. Silver is estimated in the same manner; and without alloy, or nearly so, is called *sycee*, which bears a premium according to its purity. It is cast into ingots, (by the Chinese called shoes, from their shape,) stamped with the mark of the office that issued them, and the date of their emission. It is used to pay government taxes and duties, and the salaries of officers. The ingots weigh from $\frac{1}{2}$ to 100 taels, and bear a value accordingly. Sycee silver is the only approach among the Chinese to a silver currency. Gold ingots are made, weighing ten taels each, and are worth between \$22 and \$23 each; but neither gold ingots nor doubloons, nor any other gold coin, are used as money among the Chinese.

2. COMMERCIAL WEIGHTS.

The only weights in use among the Chinese, other than money, are the *pecul* (tan), *catty* (kin), and *tael* (leang). The proportion these bear to each other and to English weights, can be seen by the following table.

Pecul.	Catties.	Taels.	Lbs. avr.	Cwt.	Lbs. troy.
1	100	1600	133 $\frac{1}{2}$	1.0.21 $\frac{1}{2}$	162.0.8.1.
	1	16	1 $\frac{1}{2}$		

Usage has established a difference between the tael of commercial weights, which, at the rate of 133 $\frac{1}{2}$ pounds to the pecul, weighs 583 $\frac{1}{2}$ troy grains, and the tael of money weight, of which the old standard is 579.84 grains troy. By the above table it appears that one ton is equal to 16 peculs and 80 catties; one cwt. is

the same as 84 catties, and one pound avoirdupois equals $\frac{3}{4}$ of a catty. The Portuguese at Macao have a pecul for weighing cotton and valuable articles; a second for coarse goods; and again a different one for rice. But the Chinese among themselves know no difference either in the weight of a pecul for different articles, or in the tael, whether used for money or goods.

3. MEASURES.

The principal measures in use among the Chinese are three, namely, long measure, land measure, and dry measure: each of these we notice separately.

Long measure. The principal measure of length is the *covid* (*chih*) which is divided into ten *punts* (*tsun*). The *covid* varies considerably, according as it is used for measuring cloths, distances, or vessels. That determined upon by the mathematical tribunal is 13.125 English inches; that used by tradesmen at Canton is about 14.625 inches; that employed by engineers for public works is 12.7 inches; while the one by which distances are usually rated is 12.1 inches nearly. The *le*, or mile, is also an uncertain measure, varying more than the *covid* or foot. Its common measure is $316\frac{1}{4}$ fathoms, or $1897\frac{1}{2}$ English feet, and it is the usual term in which length is estimated. The Chinese reckon $192\frac{1}{2}$ *le* for a degree of latitude and longitude; but the jesuits divided the degree into 250 *le*, each *le* being 1826 English feet, or the 10th part of a French league, which is the established measure at present. A *le*, according to this measurement is a little more than one-third of an English mile.

Land measure. This also has varied considerably, but is at present established by authority. By this rule, 1200 *covids* make an acre or *mow*, which contains about 6600 square feet.

Dry measure. Rice or paddy is the only article measured in vessels the dimensions of which have been fixed by law or usage; but as even rice and paddy are usually weighed when sold in large quantities, the vessels for measuring these commodities are but little used.

To perform their calculations, the Chinese have a kind of arithmetical board or abacus called *swan-pan* or 'counting board,' on which, by constant practice, they will perform calculations in numbers with surprising facility. It consists of an oblong frame of wood, having a bar running lengthwise, about two-thirds its width from one side. Through this bar at right angles, are inserted a number of parallel wires having moveable balls on them, five on one side and two on the other of the bar. The principle on which computations are made is this: that any ball in the larger compartment, being placed against the bar and called unity, decreases or increases by tenths, hundredths &c.; and the corresponding balls in the smaller division by fifths, fiftieths, &c; if one in the smaller compartment is placed against the middle bar, the opposite unit or integer, which may be any one of the digits, is multiplied by five.

Imports and Exports of Canton.

Supplementary to the account of the provincial city, published in former numbers, we introduce here a brief description of the principal articles which are bought and sold by foreigners in Canton. Some of the commodities noticed in the list, such as tea, silk, &c., will require more detailed accounts, which must be reserved for future numbers.

AGAR-AGAR. This is a species of sea-weed, of which the Chinese make the gum used in the manufacture of their transparent lanterns. It is incomparable as a paste; and is not liable to be eaten by insects. It is extensively employed in making silks and paper; and when boiled forms a sweet, glutinous compound which is used in sweetmeats. It is brought from New Holland, New Guinea and other adjacent islands; between 400 and 500 peculs are imported annually by the Chinese at a prime cost of \$1½ to \$2 per peul. Its cheapness and admirable qualities as a paste, render it worthy the attention of other countries.

ALUM. This salt is exported by the Chinese in considerable quantities to the Indian archipelago. It is probably found in the same geological positions in this, as in other countries, namely in a slate, known as *alum shale*. The supply seems to be abundant from the quantities brought to market. It is commonly much adulterated with other substances, as gypsum, lime, &c.; the taste is not so sharp as that of European alum; but the pieces are large and transparent. Great quantities of alum are employed by the Chinese in purifying the water of their rivers, which they use for culinary purposes. The duty on the article when exported is 5 taels per peul, and its value in market is from \$2 to \$3 per peul.

AMBER. This fossil is found on the shores of several islands of the Indian archipelago, and in some small quantities on the coast of China and Tung-king (Tonquin). A considerable part of the amber in the markets of the east comes from the eastern coast of Africa; and as far as investigation has gone, it is found in greater or less quantities on all extended lines of sea-coast, having been brought from the shores of Europe, America, Africa, and all the islands of the eastern part of Asia. Its value was formerly very great in those countries of the east where it was used for ornaments and incense; but other substances, cheaper and more odoriferous, have superseded it. In choosing it, those pieces should be selected which are hard, transparent and of a lively yellowish-brown color; and it should attract light substances after being rubbed on cloth. If there are insects in it, the value is greatly increased, but if the pieces are opaque and foul, they ought to be rejected. The price is from \$8 to \$14 per catty according to the quality and size of the pieces. False amber is also sold in Canton at prices almost as great as those which the genuine article bears.

AMBERGRIS. This has been often confounded with amber, which it resembles somewhat in appearance, and it is used for nearly the same purposes. The origin of the two, however, differs widely; amber being a vegetable fossil, and ambergris a substance found in the intestines of the *Physeter macrocephalus* and spermaceti whale.

It is probably generated in the animal when it is diseased, though whether it be the effect or cause is not ascertained. If no fœces are voided from the animal, when it is first harpooned, the sailors generally expect to find ambergris: 362 ounces have been taken from the body of a single whale. Kämpfer asserts that the Japanese collect it in this manner. Most of it, however, is picked up after strong winds, on the shore of the numerous islands of the Indian and Pacific oceans. The Dutch formerly purchased much of this article; they gave the king of Tidore 11,000 rix dollars for one mass weighing 182 lbs., and for which the duke of Tuscany offered 50,000. The French East India company once had a mass weighing 225 lbs. estimated at \$52,000. The shores of Africa afford ambergris in considerable quantities and in large pieces. Good ambergris is of an ash color, marked with blackish and yellowish spots, soft and tenacious like wax, and when melted entirely disappears. The Chinese test its goodness by throwing some of it scraped very fine into boiling hot tea, where, if pure it will diffuse itself equally through the fluid. It has but little taste or smell when cold; but when handled it emits a fragrant odor. It swims on water. The pure white, or that which is apparently smooth and uniform in quality, should be rejected as it is commonly factitious.

AMOMUM. The seeds of the *Anomum verum* have a strong, penetrating smell and an aromatic, pungent taste. The tree grows in China and the East Indies. The fruit is shaped like a grape, and contains three cells, each of which has a number of blackish seeds. The pods are of little value, as are the seeds also when wrinkled and small. When good, the pods are heavy, of a light grey color and filled with grains. Their uses are similar to those of star aniseeds.

ANISEED STARS. These are the fruit of a small tree, *Illicium anisatum*, which grows in China, Japan, and the Philippines. They are prized for their aromatic taste, and for the volatile oil obtained from them. The name of *star* is applied to them on account of the manner in which they grow; the pods being in small clusters joined together at one end, and diverging in the form of a star. The husks have a more aromatic flavor than the seeds, but they are not as sweet. In China, their most common use is to season sweet dishes; in Japan, they are applied to quite a different purpose, being placed on the tombs of friends and presented as offerings in the temples. They are exported at \$11 or \$12 per peck; and the oil which is extracted from them, at \$2 per catty; both for medical uses.

ARRACK. This spirituous liquor is distilled from different substances in the several countries where it is manufactured; on which account that made at different places is often found to vary much in strength and taste; the three principal kinds are made in Batavia, Goa, and Colombo. That from the former place is the strongest, and is distilled from a mixture of 62 parts of molasses, 3 of toddy or palm wine, a liquor distilled from the juice of the

cocoa-nut tree, and 35 of rice. The process of making it is as follows; the rice is first boiled, and after cooling, a quantity of yeast is added and the whole pressed into baskets, in which condition it is placed over tubs and left for eight days; during this time, a liquor flows abundantly from the rice. This liquor is distilled and then mixed with the molasses and toddy, which is all left to ferment for a week in large vats; after the fermentation is over, the arrack is distilled one, two or three times, according to the strength required. That made at Java is chiefly for home consumption, but is exported to China and India, where it is sold at 40 cents a gallon for the best, and 27 or 30 cents for the poorest.

The arrack produced at Goa is sweeter than that which comes from Java, being made entirely from toddy, by repeated distillation. It is preferred by the Hindoos to the Batavian on that account, though it is an inferior spirit, containing only one seventh of pure alcohol. That made at Colombo is the poorest and but little of it is exported.

ASSAFŒTIDA. This is the concrete juice of the roots of the *Ferula assafetida*, a tree which grows in Persia. To obtain it, the roots, after the earth is taken away from them, are covered with leaves to defend them from the sun for forty days; they are then cut off transversely, and the thick milky juice exudes and thickens on the wound; this when hard is scraped off and another transverse section made. This operation is repeated until the root be entirely exhausted of juice. The gum is nauseous and bitter, and as it grows old loses its efficacy. The masses are composed of grains, of a variegated color; the best color is a pale-red, having the grains nearly white; the odor should be penetrating, and when the piece is broken, the fracture ought to bear a marbled appearance. The vessels employed to carry this drug are so scented with the odor, that they spoil most other goods. Considerable quantities of it are brought to this market; and it ranks high in the materia medica of the Chinese physician. Its value is from \$4 to \$5 per pecul.

BAMBOO. The uses of this plant are very numerous; it is employed for purposes of building and clothing, for food, paper, boats, masts, sails, ropes, medicines, sweetmeats, lamp-wicks, beds, fodder, &c. All these uses are made of it however, only where it is indigenous. It is exported in considerable quantities, and is then used for canes and umbrella sticks, &c.

BEE-WAX. This article has been introduced by foreigners from the Indian archipelago and Europe, and it has gradually superseded the product of the tallow-tree, *Stillingia sebifera*. In the islands where the bees are found, the natives collect the wax from the nests in the forests, disregarding the honey, which is little in quantity and worthless. The islands of Timur and Timurlaut afford bees-wax in sufficient quantity to form an important article of export; the Portuguese there, send away 20,000 peculs annually to China and India, at a prime cost of \$5 per pecul. The Chinese use it to form cases or envelopes for the tallow of

the stillingia; in the manufacture of the candles used in their temples. The wax when so employed is colored with vermilion.

BETEL NUT. The leaf of the betel pepper, *Piper betle*, and the nut of the areca palm, *Areca catechu*, together constitute this article, which is improperly called *betel nut*, and which is used as a masticatory so universally throughout the east. But as an article of commerce it is always sold separately, under the name of 'betel nut,' so called because always used with the leaf of the betel pepper.

The habit of chewing this compound has extended from the islands, where the plant is found, to the continent of Asia, and it is now used from the Red sea to the Pacific. The areca nut is the fruit of a slender palm, not above six inches in diameter and about thirty feet high. The tree produces fruit from the age of five to twenty-five years. The nuts resemble a nutmeg in shape, color and internal structure, but are a little larger and harder. The annual produce of a single tree is averaged at fourteen pounds; and the little care requisite in producing it, allows the cultivator to sell it at the rate of about half a dollar a pekul. In the Deccan, the expense of rearing the palm is much greater, and the crop more precarious. The betel pepper is the vine from which the leaf is obtained, and for which alone it is cultivated. The flavor of the leaf is very peculiar, being between a herbaceous and an aromatic taste and is a little pungent. This vine requires a rich soil where there is abundance of water. The tree on which it is supported affects the quality and quantity of the produce.

The preparation of the betel nut for use is very simple. The nut is cut into slices, and wrapped in the raw leaves together with a quantity of quick-lime, enough to give it a flavor. All classes of people, male and female, are in the habit of chewing it. "It sweetens the breath," so say those who use it, "rectifies and strengthens the stomach and preserves the teeth;" it also gives the teeth, lips and gums a dark-red color, which is esteemed a mark of beauty in proportion to its darkness. Much more can be said in favor of the use of it, than of tobacco; its narcotic properties are not so great, and the taste is more pleasant. Persons of rank carry it prepared for use in splendid cases suspended from their girdles. Poor people are contented with cases of any kind, provided they contain the substance itself. A present of one of these cases is esteemed as a mark of high favor and friendship, and is valued accordingly. Among some of the inhabitants of the Indian archipelago, to refuse, on meeting a friend, to accept the betel nut is regarded as an offense, and satisfaction is demanded. So interwoven into their ideas, has the practice become, that figures of beauty are taken from it, and a face is not accounted beautiful, unless the mouth be stained of a dirty red round the outside of the lips.

The nuts brought from the coast of Malabar are not so good as those from the Indian islands, and they are injurious to the health and destroy the teeth of those who chew them. They are of two sorts, the boiled and the raw; the one is the nut alone, the other

the nut cut into slices and boiled with a small quantity of *catch* and then dried. Another method of curing the nuts is to split and dry them hastily over a fire or to dry them slowly without splitting. The betel nut is seldom carried to Europe or America, though the leaf might be employed in dyeing cottons, as it is cheap, and used for that purpose in India. Most of that imported into China comes from Java, Malacca and Penang. It varies from \$2 to \$3 per pecul. It is prepared for use in the same manner as in the islands, except that the Chinese color the lime with a red mixture.

BENZOIN or *Benjamin*. This resin is the concrete juice of a small tree, *Styrax benzoin*, which grows on the plains of Borneo and Sumatra, in a rich moist soil. Its geographical limits are the same as the camphor tree, being found only in Borneo Proper and the territory of the Battaks in Sumatra; but unlike that tree, it is cultivated. When the plants are seven years old, an incision is made in the bark, from whence the gum exudes, and is carefully scraped off. The trees produce the best benzoin in three years; this first gathering is called *head*; that produced during the next eight or ten seasons, and which is inferior in quality, is known by the name of *belly*; at the end of the last named period, the tree is supposed to be worn out, and is cut down and split to pieces, and all the gum is scraped off from the fragments of wood; this last is denominated *foot*, and is full of sticks and dirt. These varieties bear a price proportionate to their goodness; the first quality, varying at the emporia, from \$50 to \$100 per pecul; the second from \$25 to \$45; and the worst from \$8 to \$20 per pecul. The gum is brought from the interior in large cakes, which among the natives are standards of value, as metals are in other countries. These cakes require to be softened by boiling before they are packed, and care should be taken to free them from external impurities. Good benzoin is full of clear, light colored spots, and when broken appears marbled; it is almost tasteless, but when rubbed or heated gives off an extremely agreeable odor. The *head* only should be selected for Europe; the other kinds are imported to China and India and used in temples. This is the *frankincense* of the east, but different from the Arabian which is *olibanum*. It has been used for incense in the ceremonies of the Roman Catholic, the Mohammedan, the Hindoo, the Budhistic, and probably also, of the Israelitish worship. From remote ages, almost all nations have sought for this substance. The Arabians prize it more than they do their best *olibanum*; the Javanese chiefs smoke it with their tobacco; and rich Chinese often fumigate their houses with its grateful odor.

BEZOAR. This name was first applied to a concretion found in the stomachs of a goat in Persia, but latterly has been used for similar substances found in various other animals, as the horse, boar, camel, &c. That produced by the goat was formerly much prized as a medicine, sometimes selling for ten times its weight in gold; but since its constituents have been ascertained, it has ceas-

ed to be sought after. Different animals produce bezoars, the substance of which differs often in the same kind of animal, as well as in dissimilar species. The famed oriental bezoar is formed of bile and resin; other kinds are found to be made of hair, others of wood, and some principally of magnesia and phosphorus. The true bezoar from Persia is counterfeited so well by pipe-clay and ox-gall that even those have been deceived who procure the genuine from the animal. The genuine throws off only a small scale when a hot needle is thrust into it; when put into hot water it remains unchanged; when rubbed on chalk, the trace should be yellow, but green on quick lime. That found in the camel is highly esteemed as a yellow pigment by the Hindoos. The cow bezoar is valued in this market at from \$20 to \$25 a catty, and is used by the Chinese solely as a medicine. All bezoars are caused by diseases of the animals which produce them, and are formed by continual accretions to a center nodule.

BICHO DE MAR or *biche-de-mer*. This slug, (*Onchidium?*) as its name imports, is a product of the sea, and resembles that often seen in damp places on land. It forms the most important article of commerce between the islands of the Indian archipelago and China, excepting perhaps pepper. It is found on all the islands from New Holland to Sumatra, and also on most of those in the Pacific. It is produced in the greatest abundance on small coral islands, especially those to the south and east of the Sooloo group. Among the islanders it is known by the name of *tripang*; the Chinese at Canton call it *hoy-shum* (hac-shin). It is an ill looking animal, and has but few powers of locomotion in common with other *gasteropodæ*. It is sometimes two feet long; but its common length is from four to ten inches, and its diameter two. Its tentaculæ are short, and when the animal is captured are folded up under its body. It is taken with the hand by natives, who often dive for it; and after it has been cleansed, dried and smoked, it is fit for the markets. For a long time the Chinese were the sole carriers of the article; but recently foreigners have engaged in the trade, and found it profitable. In the markets it appears hard and rigid, and has a dirty brown color. The Chinese use it by itself, or as an ingredient in other dishes, and in large quantities. The varieties into which they divide it are about thirty, varying in price from \$80 down to \$1½ per pecul. About 7000 peculs come annually from Macassar, and much more than that from Manila.

BIRDS' NESTS. These, which owe their celebrity only to the whimsical luxury of the Chinese, are brought principally from Java and Sumatra; though they are found on most of the rocky islets of the Indian archipelago. The nest is the habitation of a small swallow, named (from the circumstance of having an edible house,) *Hirundo esculenta*. They are composed of a mucilaginous substance, but as yet have never been analyzed sufficiently accurately to show the constituents; externally, they resemble ill concocted, fibrous isinglass, and are of a white color, inclining to red;

their thickness is little more than that of a silver spoon, and the weight from a quarter to half an ounce. When dry, they are brittle and wrinkled; the size is near that of a goose egg. Those that are dry, white, and clean are the most valuable. They are packed in bundles with split rattans run through them to preserve the shape. Those procured after the young are fledged, and denominated *foot*, are not saleable in China.

The quality of the nests varies according to the situation and extent of the caves, and the time at which they are taken. If procured before the eggs have been laid, the nests are of the best kind; if they contain eggs only, they are still valuable; but if the young are in the nests or have left them, the whole are then nearly worthless, being dark colored, streaked with blood and intermixed with feathers and dirt. The nests are procurable twice every year; the best are found in deep, damp caves, which if not injured will continue to produce indefinitely. It was once thought that the caves near the sea-coast were the most productive; but some of the most profitable yet found, are situated fifty miles in the interior. This fact seems to be against the opinion that the nests are composed of the spawn of fish or of *bicho de mar*.

The method of procuring these nests resembles somewhat that of catching birds practiced on the Orkney isles. Some of the caves are so precipitous, that no one, but those accustomed to the employment from their youth, can obtain the nests, "being only approachable" says Crawford "by a perpendicular descent of many hundred feet by ladders of bamboo and rattan, over a sea rolling violently against the rocks. When the mouth of the cave is attained, the perilous task of taking the nests must often be performed by torch-light, by penetrating into recesses of the rock, where the slightest slip would be instantly fatal to the adventurers, who see nothing below them but the turbulent surf making its way into the chasms of the rock." Such is the price paid to gratify luxury.

After they are obtained, they are separated from feathers and dirt, are carefully dried and packed, and are then fit for the market. The Chinese, who are the only people that purchase them for their own use, bring them in junks to this market, where they command extravagant prices; the best or *white* kind often being worth \$4000 per pecul, which is nearly twice their weight in silver. The middling kind is worth from \$1200 to \$1800, and the worst or those procured after fledging, \$150 or \$200 per pecul. The most part of the best kind is sent to Peking for the use of the court. It appears, therefore, that this curious dish is only an article of expensive luxury among the Chinese; the Japanese do not use it at all, and how the former people acquired the habit of using it is only less singular than their persevering in it. They consider the birds' nests as a great stimulant and tonic, but their best quality, perhaps, is their being perfectly harmless. The labor bestowed to render them fit for the table is enormous; every feather, stick or impurity of any kind is carefully removed; and then, after un-

dergoing many washings and preparations, it is made into a soft, delicious jelly. The sale of birds' nests is a monopoly with all the governments in whose dominions they are found. About 243,000 peculs, at a value of \$1,263,570, are annually brought to Canton. These come from the islands of Java, Sumatra, Macassar, and those of the Sooloo group. Java alone sends about 27,000 lbs., mostly of the first quality, estimated at \$60,000

BRASS LEAF. This article is manufactured by the Chinese for the Indian markets. It is worth from \$45 to \$50 a box.

CAMPHOR. This well known gum is brought from Sumatra and Borneo. In those islands, the tree is confined to a small extent of country. In Sumatra, the best gum is obtained in the district of Baroos, and hence all similarly good, brought from those two islands is called *baroos* camphor. The tree, *Dryobalanops camphora*, is found nowhere else in the world, and there only extends three degrees north of the equator. To collect it the natives go into the forests, cut down the trees and split them open, and scrape the gum from the fragments; it is there found in small pieces or as a thick gum, ready for use. It is said that not a tenth of the trees yield any gum or oil; and as they are not cultivated, camphor is becoming gradually more and more scarce. Before killing the trees it cannot be ascertained whether they are productive or not. It is divided into three sorts; the best is in lumps, apparently crystallized in the fissures of the tree; the second is somewhat brownish with but few sticks in it; while the last and worst is the refuse scrapings. In packing it, particular care should be taken that the boxes are sound, else its volatility will cause it to decrease materially. Good camphor is strong and penetrating, of a bitterish aromatic taste, and when bitten imparts a cooling sensation to the mouth. All that is produced in Sumatra and Borneo, about 800 peculs annually, is brought to China; the high price, near \$18 a pound, paid for it by the Chinese, induces the sellers to bring it to this market. The proportion between the prices of Baroos and Japan camphor is as 18 to 1, though no perceptible difference can be seen between them.

Nearly all the camphor carried to Europe and America, is obtained from the *Laurus camphora*, a tree which grows in China, Japan, and Formosa. The tree, including the roots, is cut into small pieces, and boiled; the sublimed gum is received into inverted straw cones. It is then made into greyish cakes of a crumbling consistency, and brought to market; that from Japan is esteemed the best, though that from Formosa is good. The Dutch in seven years imported into Europe from Japan alone, 310,520 lbs. Its price varies from \$20 to \$30 per pecul, while the Baroos is \$1000 to \$2000. The wood of the *Laurus* makes a very good material for trunks, boxes, drawers, &c., as the scent preserves it for a long time from insects. The wood that has been boiled is worth but little, being porous and scentless.

CAPOOR CUTCHERY. This is the root of a plant which grows in China; it is about half an inch in diameter, and is cut into small

pieces and dried for exportation; has internally a whitish color; but externally it is rough and of a reddish color: it has a pungent and bitterish taste, and a slight aromatic smell. It is exported to Bombay and from thence to Persia and Arabia; it is said to be used for medical purposes and also to preserve clothes from insects. The price is about \$6 per peul.

CARDAMOMS. There are several varieties of these, produced by various plants in different countries. The lesser and greater are, however, the principal distinctions, made in this article. The less cardamoms are obtained from a small shrub, *Elettaria cardamomum*, which grows on the coast of Malabar. They are the capsules of the plant, and merely require drying to be ready for sale. They have a sweet aromatic flavor; and the seeds when chewed impart a grateful pungency to the mouth. The capsules have a bright yellow color, a pungent smell, and when good are plump and broken with difficulty. They should be well dried. In the mountains where the cardamom grows, the natives fell and burn the trees to cause others to grow; wherever the ashes fall, it is said that this plant will spring up, and that those cultivated are of an inferior quality. The greater cardamoms are the fruit of the *Amomum cardamomum*, a tree which grows in China, Ceylon, Java, and other places. The seeds are of a triangular shape and of a black color; and longer and larger than those of the other kind. They are inferior in pungency and flavor to the less and only used when the other cannot be obtained. Both are employed for culinary purposes among the Chinese, by whom alone they are imported. The less cardamoms are carried to Europe for medicinal and other uses.

CASSIA. This is of three kinds; cassia lignea which is the bark of the tree, cassia buds, and cassia fistula or pods; the latter of these is usually known by the name of senna. *Cassia lignea* is the substance commonly called cassia, and is exported from China to all parts of the world. It is the decorticated bark of the *Laurus cassia*, a large tree which grows in Japan and China in great quantities; the tree is also found in the northerly islands of the Indian archipelago. The bark is stripped off by running a knife longitudinally along the branch, on both sides, and then gradually loosening it; after it is taken off, it is suffered to lie for twenty-four hours, during which time it undergoes a kind of fermentation, and the epidermis is easily scraped off. The bark soon dries into the quilled shape in which it comes to market. Thin pieces, having an agreeable taste, a brownish red color and a tolerably smooth surface are the best kind; that which is small and broken, is of an inferior quality. The cassia brought from Ceylon and Malabar is inferior to the Chinese, more liable to foul packing, thicker and darker colored and less aromatic. The Chinese cassia is sewed up in mats, usually two or more rolls in each mat, and a pound in a roll; it is easily distinguished from cinnamon, which it resembles, for it is smaller quilled, breaks shorter, and is less pungent. The trees do not however grow in the same countries, and there-

fore the liability to mistake will happen only in distant markets. *Cassia fistula* is the plant that produces the cassia pods; this grows in China, and the East Indies, but that from Egypt and South America has superseded it. *Cassia buds* are not obtained from the same tree as the cassia lignea, but are the fleshy receptacles of the seeds of the cinnamon tree. They bear some resemblance to a clove, and when fresh, possess a fine cinnamon flavor. Those that are plump and fresh, and free from stalks and dirt are considered the best. It is probable, however, that much of this article is procured from the cassia tree, since it is found in this country, where the true cinnamon tree is not known. If the buds are packed in the same bundles with the bark, the flavor of both are improved. The relative value of cassia bark and buds is as 8 to 5; this varies however according to the quantity in market.

CASSIA OIL is obtained from the leaves of the cassia tree by distillation; and is used as a medicine, under the name of *oleum malabathri*. It is easily tested by putting it on the hand, where it will evaporate slowly, and any foreign substance in it will thus be detected. The leaves are exported under the name of *folia malabathri*. There is hardly a product of the east that is more useful than the cassia tree. The wood, the bark, the leaves, the buds, and the oil, are all in request for various purposes in carpentry, medicine and cookery. The price of cassia varies from \$8 to \$10 per pecul; the buds are generally a little advance of that, and the oil is from \$1½ to \$2 per catty.

CHINA ROOT. This is the root of the *Smilax China*, a climbing plant. The roots are jointed, knobbed, thick, of a brown color, and break short; when cut, the surface is smooth, close, and glossy; but if old and wormy, dust flies from it when broken. The market price varies from \$3½ to \$4 per pecul. It is used by the Chinese extensively as a medicine, and is exported to India for the same purpose.

CHINA WARE, or Porcelain. Very little of this ware is now exported. When the productions of the east, were first carried round the cape of Good Hope, the porcelain of China bore an enormous price, and the profits of the first shipments were great. But the process of manufacturing it having been ascertained, the European nations began to make it, and soon rivaled the Chinese. China ware is sold in sets, consisting of a table set of 270 pieces at from 12 to 75 taels, a breakfast set of 20 pieces at three taels, a long tea set of 101 pieces at 11 to 13 taels, and a short tea set of 49 pieces from 5 to 6 taels. Flower pots, vases, jars, fruit baskets, table ornaments &c. are also made of porcelain to any pattern by the Chinese.

CLOVES. These are the unopened flowers of a large tree, *Caryophyllus aromaticus*, which grows in the Molucca islands, and is cultivated to a very limited extent in Sumatra and Mauritius. The tree resembles the pear tree in shape; the bark is smooth and adheres closely to the wood; the leaves are reddish on the upper

and green on the under side; and the whole plant, like the cinnamon tree, has a strong aromatic odor. When an exotic, the tree does not begin to produce till 9 or 10 years of age, but in its native soil, is usually productive at 5 or 6. The buds appear in the beginning of the rainy season, about the first of May, and during the four following months are perfected: they are green at first, then yellow, and finally, when ripe, change to a blood-red color. Soon after this, the flowers open and in three weeks the seeds are fully ripe. They are gathered very carefully by the hand and by crooked sticks, in order that the trees may not be injured. Sir T. Herbert gives the following fanciful description of the buds of the clove. "It blossoms early, but becomes exceedingly inconstant in complexion, from a virgin white varying into other colors; for in the morn, it shows a pale green, in the meridian, a distempered red, and sets in blackness. The cloves manifest themselves at the extremity of the branches, and in their growing evaporate such sense-ravishing odors, as if a compendium of nature's sweetest gums were there extracted and united." They are cured by placing them on hurdles over a slow fire for a few days, and afterwards in the sun, until they are thoroughly dried. The produce varies in different years; the average quantity for an orchard is from 6 to 10 lbs. from each tree; some trees have produced 150 lbs. in one season. The ordinary age is 70 years in Amboyna, and in their native isles about 90. In commerce, there are four varieties of the clove; the common, the female, the royal, and the wild or rice clove. The two latter are smaller and more scarce than the other kind. The best cloves are large, heavy, have a hot taste, and an oily feel. Those which have had the essential oil extracted, are shriveled and usually want the knob at the top.—The clove trade is in the hands of the Dutch, and has been a monopoly ever since they obtained supremacy in the Moluccas: the cultivation of the tree is restricted to the single island of Amboyna. Cloves are now 55 per cent. dearer than when first brought round the cape of Good Hope, and are sold to the consumer at an advance of 1258 per cent. on first cost of production! The price for Molueca cloves in this market is from \$28 to \$30 per pecul; for those from Mauritius, \$20 to \$24 a pecul.

Mother cloves are a larger and inferior description, of late years imported from the straits of Malacca. The price fluctuates greatly according to the supply; from \$10 to \$12 per pecul, however, is the average. We believe it is used for scents.

OIL OF CLOVES. This is procured by distillation, and is exported for various uses in the arts. If it is suspected to be adulterated by any other oil, it can be proved by dropping into it spirit of wine, when the two will separate; or by setting it on fire, when the smell of any other will be detected. The color when pure is of a reddish-brown, which gradually becomes darker by age.

COCHINEAL. This insect is brought to China from England and Mexico, and is used for dyeing silk goods, crapes, &c. The insect itself is about one-third of an inch in length, and has been

materially improved by culture from what it was in its wild state ; it lives solely on the leaves of the *Cactus cochinitifer*, a species of prickly pear. Attempts have been made to raise it in India, Java and Spain, but with little success. The climate and situation of China and Japan being similar to Mexico, it is probable that the cultivation of the plant and domestication of the insect would be successful in these countries. In selecting cochineal, care should be taken that the black color has not been occasioned by art ; this deception may be discovered by the bad smell of the article. The insects are divided into the wild and the domesticated, and are collected thrice in a year. A watery infusion of cochineal dyes scarlet ; an alcoholic infusion produces a deep crimson ; while an alkaline, gives a deep purple color. It is occasionally imported to China from Mexico via Manila, and is called *ungarbled*, to distinguish it from that brought from England, which bears the name of *garbled*. Garbling is the term given to the process of repacking it free from all impurities. Garbled cochineal is valued at \$280 or \$300 per pecul, and ungarbled at from \$180 to \$200.

COPPER. This metal is found in Persia, Sumatra, Borneo and Japan. It formed an export to England from Persia formerly, but is now sent to the India presidencies. In the island of Borneo, copper has been lately discovered ; and it has been known a long time in Sumatra and Timur. The utensils made of this metal in those islands, always contain some iron ; and the bars or cakes into which it is cast when sold for unalloyed copper, require much labor to make them pure and malleable ; the ore is so rich as to produce half its weight of pure copper. The copper found in Japan contains gold in alloy ; it occurs in the market in small bars, six inches long, flat on one side and convex on the other, weighing 4 or 5 oz. each ; this copper is the most valuable of any found in Asia. South American copper is brought to this coast, but not latterly to the market in Canton ; as it fetches a higher price at Lintin for remittance to India. The price so obtained is from \$19 to \$22 per pecul. There is a natural alloy of several metals found in the interior of China, known under the name of *white copper*, which is used by the natives in great quantities. The constituents are not known, but copper and iron are probably the chief. It is used for dish covers, which when new and polished look almost as well as silver.

CORAL is brought from all the islands of the Indian archipelago, and is here wrought into many ornaments. It sells from \$40 to \$60 per pecul according to the color, density, and size of the fragments. When made into buttons, it is used among the Chinese as insignia of office.

COTTON. Of this import we need only enumerate the different kinds. The raw cotton is brought mostly from Bombay and Bengal in English ships ; it sells from 9 to 13 taels per pecul. Except sheetings, which are from America, cotton piece goods come principally from England, the chief articles of which are cambries, muslins, chintzes and long-cloths. In selecting these goods

for this market, especially chintzes, those should be chosen which are well covered with large, gay flowers and leaves; a green ground is preferred. No formal figures, nor any Chinese representations are suitable. Good, unbleached long-cloths are the most suitable; cambries are not in much demand. Cotton yarn comes from England and India; that from numbers 22 to 45 is the most saleable. The sale of cotton goods of all descriptions is annually increasing. The Chinese tacitly acknowledge their superiority, by slowly adopting them in the place of their own goods.

CUBEBS. These are the fruit of the *Piper cubeba*, a vine growing in China, Java and Nepaul, and resemble pepper-corns so closely, that externally they are only distinguished from them by a process on that side by which they were attached to the stalk. Cubebs have a greyish-brown color with a wrinkled pericarp enclosing a single seed, and a warm, pungent taste, with a pleasant, aromatic smell. The heavy, plump and large fruit is the best; if not ripe, the seed is soft and the covering much wrinkled. Cubebs are valued in this market from \$18 to \$20 per pecul; 18,500 lbs. were imported into England in 1830 from the east; but the Dutch carry on the largest trade in this article.

CUDBEAR is a powder used in dyeing violet or crimson; it is procured from the *Lichin tartaricus*, a plant found in Iceland. Its colors are not durable, when it is employed alone, and it is therefore used as a body to other more expensive dyes, as indigo, cochineal, &c., making them more lively. It is used but little by the Chinese, and the demand in this market is not great.

CUTCH, or *Terra Japonica*. This for a long time was regarded as an earth, and supposed to be brought from Japan; but it is now ascertained to be a gummy resin, which is extracted from the *Acacia catechu*, a tree growing in Persia near the gulf of *Cutch*. It is imported from Bombay and Bengal; that brought from the former place is friable, and of a red-brown color, and more hard and firm than that from Bengal. The cakes resemble those of chocolate, but when broken they have a streaked appearance. Good cutch has a bright uniform color, a sweetish, astringent taste, melts in the mouth, and is free from any grittiness. But it varies considerably even when good; some kinds being ponderous and compact, others very light and friable; some more and others less astringent; which differences seem to result from the manner and the seasons in which it is obtained. It is also found in *Pegu*, *Siam*, and *Singapore*, from whence it is brought to Canton. The value varies from \$4 to \$5 per pecul.

DAMMER, or *Damar*. This is a resin flowing spontaneously from several species of pine in the Malay peninsula. It is found in large, hard lumps both under the trees and on their trunks. It is mixed with a softer kind which makes it less brittle; and is then used for closing seams in boats, and other wooden vessels.

DRAGON'S BLOOD. This resinous gum has been long known; it received its present name from the ancient Greeks, who used it extensively. It was also a favorite substance with the alchemists

in making their mixtures. It is the concrete juice of the *Calamus rotang*, a large rattan which grows in Borneo and Sumatra. It is found in the market either in oval drops or in large and impure masses, composed of several tears. That which is good is of a bright crimson when powdered, and if held up to the light in masses is a little transparent. The tears are usually the finest, and the most resinous and pure. If it is black when made fine, or very friable in the lump, it is inferior. It is often adulterated with other gums; but that which is genuine melts readily and burns wholly away; is scarcely soluble in water, but fluent in alcohol. Its uses are various in painting, medicine, varnishing and other arts. The best is procured at Banjermassin in Borneo; and is brought to this market in reeds; its price varies from \$80 to \$100 a pecul. The Chinese hold dragon's blood in much estimation and are the principal consumers of it in the east.

EBONY. This is the heart wood of the *Diospyrus ebenus*, a tree growing in Mauritius and other islands of the Indian ocean. The best wood is of a jet black, the texture compact, free from cracks and not worm-eaten. The outside wood should be all taken off. There are other kinds of wood resembling ebony in external appearance, which are often substituted for it. The price of Mauritius ebony is about \$6 a pecul, and of Ceylon and India about \$2½ per pecul.

ELEPHANTS' TEETH. These are obtained in South Africa, Siam, Burmah, &c. They should be chosen without flaws, solid, straight and white; for if cracked or broken at the point or decayed inside, they are less valuable. The largest and best weigh from 5 to 8 to a pecul, and decrease in size to 25 in a pecul. The cuttings and fragments are also of value sufficient to make them an article of trade. Elephants' teeth when manufactured are called ivory. The number of articles which the Chinese make of it, and the demand for them on account of their exquisite workmanship, render its consumption very great; and the quantity is gradually decreasing. The circular balls which the Chinese make of ivory, as well as their miniature boats, are neat specimens of carved work. From a quantity of ivory not weighing over three pounds they will make a toy worth a hundred dollars. The largest teeth are valued at \$90 a pecul and the cuttings at \$70. Burmah and Siam afford the greatest part of those which are brought to China.

FISH-MAWS. These are the stomachs of fishes, and are used as an article of luxury among the Chinese. They are of a cartilaginous nature; and when properly dried are fit for the market. If they become damp, they will decay and are then worthless. They are brought in junks from the Indian islands; the price is from \$50 to \$70 per pecul.

FLINTS, which are uncut, are imported from Europe at 50 cents and sometimes one dollar per pecul.

GAMBIER. This is the inspissated juice of a trailing plant, *Funis uncatius*, which grows in the more western and poorer is-

lands of the Indian archipelago. It was once called Terra Japonica and often confounded with that substance. The plant is cultivated in dry situations; the seedlings are transplanted when eight or nine inches high; and at the end of the first year the leaves are ready to boil, in order to extract the juice. It is brought to market in square cakes, the best of which have a white, clear appearance, but the inferior are brownish. The plants grow eight or ten feet high, and yield for twenty years. Gambier in considerable quantities is imported to China from Java and other islands. The trade is in the hands of the Chinese, who pay at the emporia \$1 or \$2 per pecul. One of its principal uses among the islanders is as a masticatory with the betel nut. The taste is first bitter, but when it has remained in the mouth some time, agreeably sweet. It is used in China for tanning leather, which it renders porous and rotten.

GAMBOGE. This is so named from the country Camboja, which produces the tree, *Stalagmitis gambogioides*; it is also found in Ceylon, (where it distils spontaneously,) China and Siam, in which latter country the tree is wounded to obtain the gum-resin. The juice is inspissated in the sun, and made into rolls which have a brownish-yellow color and a smooth surface. If when rubbed upon the wet nail, the color be a bright lemon, and no grittiness be felt, it is good; when burned the flame is white, and the residuum a greyish ash. The large, gritty and dark colored pieces are of an inferior quality. Gamboge is used as a beautiful pigment and as a medicine; and is carried in considerable quantities from China and India to the west. It varies from \$70 to \$75 a pecul.

GALANGAL. This root is obtained from two different plants, the greater from the *Kæmpferia galanga*, the smaller from the *Maranta galanga*. The greater is a tough, woody root, with a thin bark and full of knobby circles on the outside. It is bitterish, less aromatic and less valuable than the smaller. This latter is a root of a reddish brown outside, and pale red within. The roots are rarely over two inches in length, extremely firm, though light. The best is full and plump, has a bright color, a hot, acrid, peppery taste, and an aromatic smell. The smaller which should always be obtained if possible, sells for \$3½ to \$4 per pecul. It is used principally in cookery.

GINGER PRESERVED. This is a sweatmeat made of the tender roots of the ginger plant, *Zingiber officinalis*, and when good has a bright appearance, a dark yellow color, and is somewhat transparent. If the roots are old, the conserve will be stringy, tough and tasteless. Considerable quantities of preserved ginger are carried to Hamburgh and Singapore; to the latter place for reexportation to the continent of Europe.

GINSENG. This is the dried root of the *Panax quinquefolia*. It is obtained in Tartary, and also in America, from which latter country it is exported to China. It is generally considered by the Chinese physicians as a panacea. All the ginseng growing in Tartary is the property of the emperor, and he sells a quantity

yearly to his faithful subjects, who have the privilege to purchase it at its weight in gold! Enormous quantities are consumed by the Chinese who consider no medicine good, if this be not a constituent. The roots are about the size and length of a man's little finger, and when chewed have a mucilaginous sweetness; and if good, will snap when broken. They should be sound, firm and free from worm holes. The Chinese consider that which comes from Tartary to be the best, even when they can see no difference. When first brought from America, the profits were 500 or 600 per cent; but it has declined so much of late, as hardly to be worth the first cost. Ginseng is clarified by being boiled and skinned, which operation renders the root almost transparent. Clarified ginseng varies in price from \$60 to \$65 a pecul; the crude, from \$35 to \$40 a pecul.

GLUE. This is manufactured by the Chinese for their own use, and has lately become an article of export to India and beyond the cape of Good Hope. It is inferior to the Irish glue in tenacity and purity; but is fit for all kinds of carpenter work. It sells at \$8 to \$10 per pecul.

GOLD. This metal is brought to China from Borneo, and generally in the shape of dust, but sometimes in impure masses; and is here cast into bars, called shoes. These are not used as coin, but merely as bullion. Great care is necessary in buying gold in order to prevent deception; for the Chinese often adulterate it with other metals; by coating the shoe with a thick crust of gold and making the inside of silver or of copper; by introducing lumps of other metals into the shoe, &c. The purity of the gold is ascertained by means of the touchstone, which gives a different colored mark, when the gold is of unequal purity. This is called a touch, and the color shows the proportion of pure gold. Needles for comparison are also made of different proportions of alloy, by which the stone is rubbed at the same time with the gold. Gold is also tested by nitric acid which will act upon the alloy, but does not upon the gold. In Borneo and some of the other islands, acid is not allowed to be used. To express the fineness of gold, it is divided into 100 parts called touches; if the gold is said to be 96 touch, it has four parts of alloy. The Chinese are so expert in the use of the touchstone, that they can detect the alloy when it is only one part in two hundred. They are not allowed to test their gold in any other way; it therefore becomes a matter of some importance to be able to ascertain the purity of the metal by the touchstone. The touches have each a separate name, and usually the shoes are shaped differently to distinguish them. The range of the touch is between 90 and 100. Gold leaf is made by the Chinese in great quantities, and is used for ornaments, &c. in their temples. It is also exported to India.

HARTALL, or orpiment. This is an oxyd of arsenic and is used as a yellow paint. It is found in China. Hungary and Turkey, When good, it has lemon yellow with a shade of green, and a foliaceous, slattery texture; its lamina are a little flexible; when

burned, it throws off much sulphureous smoke. The market price is from \$8 to \$11 per pecul.

HORNS and Bones of various animals are brought to China in junks from the adjacent countries and islands, and form an important article of import with the native vessels. The horns are made into handles, buttons, and other useful articles; and the bones are burned into lime. In a single year, 502 peculs have been brought to Canton.

INDIA INK. This is the only ink used by the Chinese. It is made of lamp-black and glue, size or gum, and formed into cakes or sticks, which are often perfumed and gilded. Good ink is of a shining black, and free from all grittiness, which last particular can be ascertained by rubbing it on the wet nail. It was once supposed that India ink was made of the black fluid found in the cuttle fish, after being inspissated and purified.

IRON in bars, rods and scraps has lately become an article of importance in this market. Bar iron from 1 to 3 inches wide, and rod of $\frac{1}{4}$ inch and less, are the common sizes imported. Bar is worth from \$1.20 to \$1.40 per pecul; rod from \$2.50 to \$3; and scrap about \$1.50 per pecul.

LACQUERED WARE. This ware was formerly exported in considerable quantities, but owing to the liability of injury and the little demand for it in foreign markets, the exportation has dwindled to a mere trifle. The articles now sent to England and the United States consist of those which have always been in request, as fans, waiters, boxes, tea-boards, &c. The patterns worked on them affect their sale, and the least mark spoils the varnish. The best kind of ware comes from Japan, but it is rather difficult to be obtained. The varnish with which this ware is covered has not been successfully imitated in Europe.

LEAD. Much of this metal is imported in the form of pig and sheet lead. The market price varies from \$4 to \$5 per pecul. Lead, comparatively speaking, is very scarce in Asia and the Indian islands. Most of that which is used comes from Europe and America. Perhaps the low state of civilization in the countries of Asia, has left undiscovered many treasures in the bosom of the earth, which may be brought to light in after times, when the states inhabiting this continent shall have other objects of attention, besides war and conquest. Lead has not yet been found in the islands of the Indian ocean; but New Holland, New Guinea and Borneo yet remain unexplored. A considerable part of that imported is made into paints by oxydation, and exported again as red and white lead. The red lead sells for about \$11 per pecul, and the white at \$10. The lining of tea-chests consumes a proportion of the lead brought to this country. The mode of making the sheet is very simple and expeditious. Two smooth stones of marble are placed near the melted lead, and the workman, holding the upper one by the side, with the opposite edge resting on the lower stone, pours the liquid metal on the under one and then drops that he held in his hand; the sheets are made into the

the requisite form by soldering. The art of dropping the upper stone in such a manner as to make the sheet of a uniform thickness is the only difficult part of the operation.

MACE. This substance is the reticulated middle bark of the covering of the nutmeg, *Myristica moschata*. Mace has a lively reddish-yellow color, approaching to saffron, and a pleasant, aromatic smell, with a pungent, bitterish taste. Good mace is tough, fresh, and oily. It is packed in bales, and care is requisite that it be not too dry or too wet, as both alike injure it. Mace has all the properties of the nutmeg in a less degree except that it is more bitter. There is a kind of mace found in Malabar, which externally so much resembles the true, that the sight alone cannot distinguish between them. That from this coast has a resinous taste and is but slightly aromatic. Whether the tree, that produces this last, has also the nutmeg we do not know, but it is probably an inferior species of the same tree.

MATS. These are made by the Chinese very beautifully, and the demand for them has increased the importation of rattans within the last few years. They are durable, and when worked with fanciful designs are handsome. Floor mats are also made of rush and bamboo for a cheaper article, but the rattan are the best. When shipped, care should be taken that they are perfectly dry, or they will mildew and become rotten. Table mats are put up in sets of six each, of different sizes.

MOTHER OF PEARL SHELLS. These are imported to and exported from this port. The Persian gulf, the coasts of India, and the islands of the Indian archipelago, produce them in the greatest abundance. They vary in size, and are sometimes a foot in diameter and proportionally thick. Their value depends upon the transparency and lustre of the naker or inside coat; those shells that are rough or have yellow spots in them are of an inferior quality. The shell, *Mya margaritifera*, is thick and rough on the outside. It is found in fresh water, but when in that situation is worthless. The Chinese manufacture pearl shells into great number of trinkets and toys, as beads, seals, knife-handles, spoons, boxes, &c.; they also inlay it into lacquered ware to represent flower, trees, &c., when the play of colors is very rich. The shells are brought in the rough state by junks and foreign vessels, and sell from \$15 to \$12 per pekul. When exported, the price is at a small advance to cover the Chinese duty.

MUSK. The genuine musk is much prized, and is rare and costly; on which account it is often and much adulterated. It is found on a species of antelope, *Moschus moschifera*, inhabiting Thibet, Siberia, and China. It is probable that musk is obtained from several kinds of deer in the central parts of Asia. In this market, musk is found in the bags about as large as a walnut, in which it grows on the animal. Good musk is of a dark, purplish color, dry and light, and generally in concrete, smooth, unctuous grains; its taste is bitter, and its smell strong, and disagreeable. The bags are often counterfeited by those of skin; but these have

a paler color than the true, and the hair is uneven. The degree of purity and strength of this drug can be ascertained by macerating it for a few days in spirits of wine, to which it imparts a strong scent. Musk is adulterated with many substances and every bag should be opened. When good musk is rubbed on paper, the trace is of a bright yellow color, and free from any grittiness. The price varies from \$65 to \$80 a catty, according to the quality. It is used for perfumery and medicine. The musk-ox, found in North America also produces this substance of an inferior quality. That which comes from Russia is very inferior to the Chinese, and is probably obtained from a different animal.

MUSK SEED. These are the fruit of *Hibiscus abelmoschus*, which grows in China and other countries. The Arabians use them to give flavor to their coffee. The seeds are flat, kidney-shaped, about the size of a large pin head, and have a considerable odor of musk, with a slightly aromatic, bitterish taste. The black and musty seeds are not good; a greyish color is the natural one. They are now brought to Europe from South America and the West Indies.

MYRRH. This celebrated gum is brought from Arabia and Abyssinia, and is used by the Chinese for incense and perfumes. It exudes spontaneously from a tree of the genus *Acacia*, or is obtained by incision. It occurs in irregular grains of different sizes up to that of a horse bean. The grains or tears are resinous, greasy, and easy to be broken, of a reddish-brown color, with an acrid, warm and bitter taste. The pieces ought to be clear, light, and unctuous, but it has usually other gums mixed with it. The price varies from \$4 to \$18 per pecul in the Canton market.

NANKEENS. This is a kind of cotton cloth, so named from Nanking, the city where the reddish threads were originally made. They are divided in company's nankeens and the narrow; the former are the finest and most esteemed. Nankeens are also manufactured in Canton and other parts of the empire, and in the East Indies. Those made in China, still maintain their superiority in color and texture over the English manufacture. The price varies from \$60 to \$90 per hundred pieces.

NUTMEGS. These are the fruit of a large tree, *Myristica moschata*, which grows in the Banda isles; it is fifty feet in height, and well branched. In its general appearance it resembles the clove tree; the bark is smooth and ash colored, the leaves green above and grey beneath, and if rubbed in the hand leave a gratefully aromatic odor. The sap has the property of staining cloth indelibly. The tree bears buds, flowers and fruit at the same time. The flower is not unlike the lily of the valley. The fruit in size and appearance resembles the nectarine; it is marked with a furrow, like the peach, and as it ripens has the same delicate blush. The following description by sir Thomas Herbert is somewhat fanciful, and at the same time true. "The nutmeg, like trees most excellent, is not very lofty in height, scarce rising as high as the cherry; by some it is resembled to the peach, but varies in form of leaf and grain, and affects more compass. The nut is clothed with a de-

fensive husk, like those of a baser quality, and resembles the thick rind of a walnut, but at full ripeness discovers her naked purity, and the mace chastely entwines (with a vermilion blush,) her endeared fruit and sister, which hath a third coat, and both of them breathe out most pleasing smells. The mace in a few days, (like choice beauties,) by the sun's flames becomes tawny; yet in that complexion best pleases the rustic gatherer." The plant bears three crops in a year, but the fruit requires nine months to become perfect. The nutmeg has three coverings, which are all of different textures. The first is the outside coat, which is about half an inch thick, and when ripe cracks and opens of itself; the second is the reticulated mace which appears through the fissures of the first, and has a bright scarlet color; the third is a hard, black shell, which encloses the nutmeg. Good trees will produce from ten to twelve pounds of nuts and mace annually; but the average of an orchard is 65 oz. avoirdupois, or about two peculs to an acre. Nutmegs of a lightish-gray color, a strong, fragrant smell, an aromatic taste, large, oily, and round, and of a firm texture are the best. The holes made by insects in eating into the kernel, are often neatly filled up, which can be ascertained by the inferior weight. They are packed in layers of dry chunam. In commerce, nutmegs are divided into royal and queen, the former are of an oblong, and the latter of a round shape. The trade in this article, like that of cloves, is a monopoly in the hands of the Dutch. They have entered into treaty with the petty rajahs of the Molucca islands to destroy all the trees in their dominions, for which they pay them a small annuity. In the Banda isles, to which the cultivation is restricted, the Dutch are obliged to import slaves to tend the trees. Any person who engages in the spice trade illicitly, is liable to the severest penalties. Yet it is computed that 60,000 lbs. of nutmegs and 15,000 lbs. of mace are clandestinely exported every year. The prices paid by government for the cultivation are fixed, and during a course of years, they have been obliged to raise the compensation, till at present, they pay *five* times as much for the nutmegs as when the trade was first opened. This strange and unnatural mode of operation has forced the raising of the nutmeg tree at Bencoolen in Sumatra, but at a great disadvantage. In the China market, nutmegs sell from \$120 to \$140 a pecul.

OIL OF NUTMEGS. Nutmegs produce both an essential and a volatile oil; the former of which is known under the name of Banda soap. It should be free from impurities, and of a pleasant, aromatic smell. The volatile oil is not known in commerce. The nutmegs from which the oil has been extracted are sometimes offered for sale, but they are of no value.

OLIBANUM. This is the frankincense of the ancients, and is used in China, as in other countries, for incense in temples and perfumery in houses. The Greeks, Romans, Persians, Israelites, Hindoos and Budhists have used this substance in the various ceremonies of their religious worship. Olibanum is the gum that exudes spontaneously from the *Juniperus lycia*, a large tree which

grows in Arabia and India. The drops have a pale reddish color, a strong and somewhat unpleasant smell; a pungent and bitter taste, and when chewed adhere to the teeth and give the saliva a milky color. If laid on a hot iron, the gum takes fire and burns with a pleasant fragrance, leaving a black residuum. In market, olibanum is seen in tears of a pink color, brittle and adhesive; the boxes each contain one cwt. Garbled olibanum is valued at \$6 per pecul and the ungarbled at \$2 or \$3 per pecul in the Canton market.

OPIMUM. This is the concrete juice of the *Papaver somniferum*, a species of poppy cultivated in India and Turkey. The cultivation of it is a strict government monopoly in British India; in Malwa and other native states it is free, but subject to heavy duties in its transit to the coast for exportation. That raised in Patna and Benares is superior to the Malwa, and both are preferred by the Chinese to the Turkey opium. Good opium is moderately firm in texture, capable of receiving an impression from the finger; of a dark yellow color when held in the light, but nearly black in the mass, with a strong smell, and free from grittiness. That produced in different countries, however, varies considerably, and experience alone can determine the best article. The value increases for a short time by age; but this soon ceases to be the case, and Turkey opium in particular, deteriorates unless carefully preserved from the air. Opium is adulterated with leaves, dirt, and other substances; if very soft it is not usually good. The great consumption of this drug among the Chinese, has made the opium trade a very important branch of commerce. About fourteen millions of dollars worth have been annually sold to them for a few years past, and the demand is increasing. The trade is carried on by means of ships stationed at Lintin; here the opium is stored, and the owner gives his orders for its delivery to the buyer, who always pays the money before receiving the drug. The trade has ever been (nominally at least,) an object of dislike to the Chinese authorities, and many ineffectual edicts have been issued against it. The opium brought from India varies from \$600 to \$700 a chest, and the Turkey from \$620 to \$680 a pecul.

PEPPER. This spice is the fruit of the *Piper nigrum*, a hardy vine found in Sumatra, Malabar and Malacca. The cultivation of it is very simple and easy. Soil on primitive rocks produces the best pepper. The fruit is collected semiannually; the vine bears when three years old, and continues to do so till twenty, and lives to the age of thirty years. As soon as the fruit has changed from a green to a red color, it is picked and put into tubs, and afterwards separated from the stalks, and when dried thoroughly, it is then ready for market. Pepper is known in commerce under two names, the white and black. White pepper grows from the same seed as the black, and is deprived of its skin by being immersed in water and rubbed between the hands. It is but little used; the difference of price not being sufficient to pay for the extra labor. Good, black pepper has a very pungent smell, an extremely acrid and hot taste. That which has large grains and smooth skin, is the best. The pep-

per brought from Penang and Sumatra, is superior to that which comes from Java and Borneo. The consumption of pepper in Europe has long been very great. Ships of all nations have engaged in this traffic, and the pepper trade is now larger than that in all the other spices, and solely because it is a *free trade*. A large proportion of that brought to China is from Malacca. The price varies from \$6 to \$8 a pecul.

PITCHUCK. This is a medicine brought from India and Persia, and appears to be the roots of a plant which grows in those countries. The color and smell are similar to that of rhubarb, and when chewed, it becomes mucilaginous in the mouth. The price varies from \$12 to \$14 per pecul.

QUICKSILVER is brought to China in considerable quantities from Europe, and occasionally from America. The most part of it is converted into vermilion by oxydation, and in that state is used for painting on porcelain. Quicksilver is frequently adulterated with lead or tin; the fraud can be detected by boiling it to evaporation, when the other metals will remain; if the quantity of extraneous metal is great, the quicksilver will feel greasy, and also cleave to the skin, while the pure runs off. This metal ranges between \$60 and \$70 a pecul, and is one of the most variable commodities in the market.

RATTANS are the branches of the *Calamus rotang*, the same plant which produces the dragon's blood. They are found in most of the islands of the Indian archipelago, but in the greatest perfection in the district of Banjermassing in Borneo. The young shoots are the most valuable for their strength and pliability. After being stripped of the epidermis, the rattans are doubled and tied up in bundles containing a hundred each. As they require no cultivation, the natives are enabled to sell them at a very cheap rate. They are brought to Canton in juuks, and sell from \$2½ to \$4½ per pecul. Foreign vessels also bring them as dunnage or on freight. The Chinese use them for cordage, chairs, mats, beds, &c. Rattan ropes, bamboo timbers, and palm-leaf boards make a common house for the poor in China.

RHUBARB. This drug is the dried roots of the *Rheum palmatum*, a plant which grows in Taratry and China. From these countries it is carried to St. Petersburg and Smyrna. The rhubarb from Russia, which is the best, owes its reputation for goodness to the care taken in curing and assorting it. The Chinese dig the roots early in the spring, before the leaves appear, cut them into long flat pieces; dry them for two or three days in the shade; and then string them on cords in cool places, and dry them thoroughly. Rhubarb is often spoiled by moisture in drying, when it becomes light and spougy; it is liable also to be eaten by worms. Good rhubarb is of a firm texture; when cut has a lively, mottled appearance, and is perfectly dry. The taste is bitter, acrid and unpleasant, and the smell somewhat aromatic. If when chewed, it becomes mucilaginous, it is not good; it also imparts to the spittle a deep saffron tinge. If black or green when broken,

it ought to be rejected. Rhubarb varies in its prices; from \$38 to \$40 per pecul for those roots cured without splitting; \$65 to \$70 a pecul for the cut. The rhubarb found in this market has always been inferior to that brought from Russia and Turkey.

RICE. This is the great staple commodity among the Chinese, and the importation of it is encouraged by all possible means. Formosa, Luçonia, Cochinchina, and the Indian islands supply China with great quantities. To induce foreign shipping to bring it to this market, the government has permitted all ships laden solely with cargoes of rice to pass free of the cunsha and measurement duties exacted at Canton. The price given for a cargo of foreign rice, varies from \$1 $\frac{3}{4}$ to \$2 $\frac{1}{4}$, rising in seasons of scarcity as at present, to \$2 $\frac{3}{4}$, and for very good, \$3 per pecul.

ROSE MALOES. This is a substance of the consistence of tar; it is brought from Persia and India to China; and when good has a pearly appearance. The price is about \$30 per pecul.

SALTPETRE is brought from India, where it is obtained by lixiviating the soil. It is also found in Sumatra in caves and other protected places, and is an article of exportation from the Indian archipelago. The quantity brought to this market is small, as the Chinese make nearly enough for their own consumption. The price is from \$8 to \$10 a pecul.

SANDAL WOOD. This is the heart wood of a small tree, *Santalum album*, which grows in India, and many of the islands of the Indian and Pacific oceans. The tree resembles myrtle in size and appearance; the flowers are red and the berries black and juicy. The color varies from a light red to dark yellow; the deepest color is the best. The best wood is near the roots. In choosing sandal wood, the largest pieces, and those of a firm texture, hard, free from knots or cracks, of a sweet smell should be selected. The white outside wood is taken off by white ants, who eat it away when the billet is buried in the ground, and do not injure the heart wood. The best sandal wood comes from the Malabar coast, and sells for \$10 or \$12 a pecul; that brought from Timur is worth \$8 or \$9, while that found in the Sandwich islands, being small and knotty, is valued from \$1 to \$6. The chips also form another sort. The Chinese use sandal wood in the form of a fine powder to make incense sticks to burn in their houses and temples. An oil is extracted from sandal wood which is highly valued for its aromatic qualities. It has the consistence of castor oil, a yellow color, and a highly fragrant odor; it sinks in water.

SAPAN WOOD. This is the wood of the *Casalpina sapan*, a tree which grows in India, Luçonia and Burmah. The tree is of the same genus as the Brazil wood, and has the same properties in an inferior degree, and on that account is not imported to Europe. It is cultivated for its red dye, which is the best known to the Indian islanders. It is used in cabinet work for inlaying to a limited extent. Its value is about \$2 per pecul in the Canton market, where large quantities are brought, chiefly from Manila.

SEA SHELLS. The shores of the islands of the Indian ocean

afford a great variety of beautiful and rare shells, such as the cabbage shell, the nautilus, the trumpet shell, the dual mantle, &c. The greatest part of all the genera known can be found in great abundance in this market, and purchased at reasonable prices.—Beside shells, as objects of natural history, insects are also procurable at Canton, well preserved; they are mostly hard-winged insects as beetles; butterflies and other classes are also gathered, especially those which are gay. Precious stones are seen in small quantities, but rather inferior; cornelians and agates are the most common. Other minerals, especially limestones, are often seen cut into fantastic shapes; but these specimens being always lacquered, are spoiled for natural objects. Birds or fishes are seldom seen preserved.

SEA WEED. Several species of *Fucus* are brought to Canton in junks, and used as an article of food among the poorer classes. They are eaten both raw and cooked.

SHARK'S FINS. The fins of the shark are sought for from the Indian ocean to the Sandwich islands to supply this market. The chief supply is from Bombay and the Persian gulf. They are fat, cartilaginous, and when cooked, esteemed by the Chinese as a stimulant and tonic. They should be well dried and kept from any moisture. About five hundred pieces are contained in a pecul. The price is from \$20 to \$45 per pecul.

SILK. The importance of this article demands for it a full and minute description, which we shall defer for a future paper.

SKINS were formerly one of the most profitable articles that could be brought to the Chinese market, but their high price and the introduction of woollen goods has materially lessened their importation. Seal and otter are the most in request, the latter selling as high as \$40 a skin. Beaver, fox, and rabbit skins are in demand, but the supply is limited. Many skins are brought to Peking from Siberia by the Russians.

SMALTS. This is an impure oxyd of cobalt united with potash. In the mass it is not much used, but when ground fine is employed in coloring glass and porcelain. The powder is of a fine azure blue, and known under the name of powder blue. The demand is but limited; the price is from \$50 to \$90 per pecul.

SOY. This is a condiment made of a species of bean which grows in China and Japan. To make it, the beans are boiled soft, and then an equal quantity of wheat or barley is added; after this has thoroughly fermented, a quantity of salt and three times as much water as the beans were at first are added. The whole compound is now left for two or three months and then pressed and strained. Good soy has an agreeable taste, and if shaken in a tumbler, lines the vessel with a lively yellowish-brown froth; the color in the vessel is nearly black. It improves much by age.

SPELTER. This is the impure zinc, used in the manufacture of brass. It is in plates of half an inch thick, of a whitish-blue color. The Chinese import it but little, the mines found in their own country furnishing them with a supply. It sells at \$4½ per pecul.

STEEL. Swedish and English are the kinds usually imported. The quantity brought is increasing annually; and probably the demand will be greater every year, as the use of it becomes better known. From \$4 to \$5 per tub is the usual market price.

STOCKFISH. These are dried fish brought from Germany and England, cured without the use of salt. In appearance, when preserved, they resemble codfish. The quantity brought is small; the price is about \$5½ per pecul.

SUGAR. This is the manufactured product of the juice of the *Saccharum officinale*, or sugar cane. From all the notices that can be obtained from ancient history, it is very probable that China was the first country in which the sugar cane was cultivated. Its native country is the southern part of the continent of Asia, and its properties have been well known by the inhabitants for many ages. Among the Chinese, the cultivation of it is carried on to an extent sufficient to supply their own wants and also to form an article of export. The varieties of the cane are several, but most of those that are indigenous have a reddish juice, which renders the sugar unsaleable. The only one cultivated is the same as that which grows in the West Indies. The process of manufacturing it is simple and laborious; the machinery is coarse and the labor performed mostly by human strength. In the Indian islands, the manufacture is in the hands of the Chinese, the natives supplying them with the cane. The natives however make a coarse sugar for their own use, called *jaggery*. The sugar exported from China is principally in a crystalized state, and therefore usually called sugar candy. This is carried to India in great quantities, and its purity and beauty have been long and justly esteemed.

TEA, which now constitutes an important branch of commerce throughout the world, must be reserved for a future number.

THREAD. Gold and silver thread is imported into China from England and Holland. It is used in the borders of fine goods, in ornamenting ladies' dresses, and in other similar objects. The quantity imported is great; the English sells for from \$36 to \$40 per pecul.

TIN. This metal is found very abundant and of a pure quality in the island of Banca. It is cast into ingots weighing from 20 to 60 lbs.: the purity of these bars is superior to those which are made of tin from the mines in Malacca. All that is of a superior quality which is brought to China in bars is called 'Banca tin,' while the inferior is known as 'Straits tin.' The former sells for about \$17 and the latter for \$14 or \$15 a pecul. Plate tin is brought from England and America in boxes, containing from 80 to 120 plates, and sells for about \$10 per box.

TORTOISE SHELL. This is the crustacean covering of the *Tesudo imbricata*, an animal found on the shores of most of the Indian islands. The common name is hawk's bill tortoise. The shell is thicker, clearer and more variegated than that of any other species, and constitutes the sole value of the animal. It is heart-form, and consists of thirteen inner with twenty-five marginal divisions,

The middle side-pieces are the thickest, largest and most valuable; the others are denominated *hoof*. Good tortoise shell is in large plates, free from cracks or carbuncles and almost transparent. The small, broken and crooked pieces are worthless. The Chinese use large quantities in the manufacture of combs, boxes, toys, &c.; the chief marts of this article are Canton and Singapore, from whence it is sent to Europe and America. The price of the good varies from \$1000 to \$1100 per pecul. The very thin kind from the islands of the Pacific, is not suited to this market.

TURMERIC. This is the dried roots of the *Curcuma longa*, a herbaceous plant cultivated in all the Indian islands, and on the continent for its coloring, and aromatic qualities. The roots are uneven and knotty; difficult to break or cut; and have a light yellow color externally. The color internally is a bright yellow at first, then reddish, and finally becomes much like that of saffron. It is easily powdered for use, but the dye is very transitory, and no means have yet been found for setting it. It has an aromatic smell resembling ginger, and a warm, disagreeable, bitterish taste. The islanders use it more as a spice than a dye. In packing it, care should be taken that the boxes be secure, as the least damp injures it. Turmeric is a good test for the presence of free alkalis, and the quantity used for this purpose is considerable. Its price varies from \$5 to \$6 a pecul.

TUTENAGUE, or China Spelter. This is an alloy of iron, copper and zinc. It is harder than zinc, though less so than iron, sonorous, compact and has some malleability. The fresh fracture is brilliant, but soon tarnishes. Till superseded by spelter from Silesia it was exported in large quantities to India; but on account of its high price is now seldom or never shipped; spelter being on the contrary imported to compete with it in China. For boxes, dishes, household utensils and other similar purposes, tutenague is well adapted. The art of making it is not known to Europeans. Its export price used to be about \$14 a pecul.

VERMILION. This is made of quicksilver by oxydation and is then exported. It is also used for painting porcelain. The price, now about \$33 a box, is entirely regulated by that of quicksilver. The boxes contain 50 catties each.

WHANGEES, or Japan canes. These are the produce of a plant which grows in China. They are well calculated for walking sticks, and should be chosen with care; those that are bent at the head, and have the knots at near and equal distances are preferred. They should be tough, pliable and tapering. Their value is about \$18 per thousand.

WOOLLENS. The demand for these is annually increasing. The principal goods imported are broad cloths, long ells, cuttings, woileys and camlets. Woollen yarn is also brought in small quantities.

Note. In the preceding list several minor and unimportant articles have been omitted. The principal authors consulted were Crawford's Indian Archipelago, Milburne's Oriental Commerce, Macculloch's Commercial Dictionary, and Hooper's Medical Dictionary. Considerable aid was also obtained from merchants in Canton.

Free Trade with the Chinese.

In our number for December last, a document appeared on *free trade*, which was written by a British merchant, and to which 'another British merchant' has replied in a paper now before us. We wish the writer had given us his name, or been more careful to correct the errors of his copyist; and he must excuse us if we have not in every case given his words correctly; we wish also that he had confined his remarks more closely to the subject, and canvassed more ably the arguments of his opponent. Few, *very few*, will agree with him, that England and France 'are alone superior to China in civilization;' or that 'happiness is more generally diffused through its population,' than among the people of 'any other nation.' There are other points which are questionable: that the Mantchou conquerors of China 'cherish the mass of the people and oppress only the rich,' does not (in our opinion) appear, except in imperial edicts, where rude barbarians and even the beasts of the field are "tenderly cherished and compassionated" by the celestial dynasty. But the writer, whoever, he may be, shall speak for himself. Addressing the British merchant, he says:

I HAVE read with satisfaction your recent publication regarding the future benefits to accrue from a free trade with China, and I have not failed to observe with pleasure that a more sensible ground is there upheld for possible changes in our relations with this country, than in the war-denouncing theories hitherto mooted by the Canton press. Nevertheless, to use your own expression, a strong "smell of blood" pervades your theory; and, pardon me for saying so, there are very many parts of your paper which directly contradict others, and very many in which unconsciously, your argument defeats itself. It is true that the trade from England has hitherto been conducted more with a view of meeting the demands of the Canton market, than those of the whole of China; more to form a medium of remittance for the Indian revenue, profitable alike to the Chinese and British merchant, than with a view to force a trade, contrary to the orders and enactments of the Chinese government, and, I believe, perfectly indifferent to the people. They want in their present condition, but very little that we can bring them; although fictitious wants necessarily arise from free intercourse, whether for the advantage of the consumers is very questionable; nor is it fair to assume the gradual introduction of opium, as a test that useful and bulky manufactures can be introduced into the country by the same channel.

Opium is considered by the imperial government, of so ruinous a tendency to the morals and condition of the people, that it is altogether a prohibited article; its value is necessarily enhanced by such prohibition; and the evils which are assumed as flowing from it, necessarily arise from the very means employed to exclude it. And it is so with all smuggled spirits; the parties among the Chinese engaged in its introduction are a degraded class, the consumers are obliged to pretend secrecy; and shame drives people of condition into holes and corners to enjoy a luxury, which if admitted under the usual restrictions, it is fair to presume would not have a more injurious effect amongst the Chinese, than it carries with it through the whole of India; where the highest classes smoke and eat opium in large quantities without any more evil conse-

quences than attend the use of wine and spirits under a moral restraint. There are men who wallow in drunkenness in all countries. The introduction of opium is easy; it is universally conveyed from the junks by being carried on shore in small balls concealed about the person, and is sufficiently valuable to recompense the chance of detection. How is this with broad cloth, calicoes, cotton, iron, and lead, &c. &c? And are not the Chinese, a happy, thriving, and contented people without these articles? Is it necessary for them to export their own manufactures or the produce of their own soil? The one has almost entirely ceased, even from Canton, the other only exists in the form of 'tea;' but this is far too valuable an article in its transit through China, both as an employment to the people, and a source of revenue to provincial officers, for the government to permit it to be exported nearer the region of its growth, unless compelled to do so by "British cannon;" and who will venture to uphold such a system, or say we have a right to make a nation trade on our own terms, and in ports of our own selection?

We must not be led astray by the reports of those who have recently visited the northern ports, and who without exception admit, that although the theory of opening ports is as good as ever, the practice of forcing commodities has been a miserable failure in all save opium. Without wishing to impugn their authority, I will only observe that the sources of it are impure; doubtless those natives with whom they conversed, expressed to the European supercargoes, that the nation was anxious for an open trade, the mandarins only against it; that every custom-house officer was a rogue and every war-boat a smuggler; that the government was rotten, &c. But, independent of the fact that these Chinese, principally smugglers, cordially detest every sort of custom-house officer or government officer of any description, are such authorities to be trusted? Other parties conversing with foreigners knew their auditors, knew the purpose on which they were bound; and, being no bad judges of human nature, told those tales which they were well aware would be most pleasing to their hearers, who were all men necessarily prejudiced to believe whatever suited their own views. I question whether we should not hear the same story about prohibitory and other duties in England and France, or any less civilized country: and in truth, I believe, these two countries are alone superior to China in civilization. I cordially agree with the British merchant that, as a warlike nation, China is contemptibly weak, although its internal and domestic power is very great, because it pleases and cherishes the mass of the people and oppresses only the rich, who are always objects of envy to the poor. It is true a single gun-boat would make the whole Chinese navy quail; but the imperial government of China has a firmer hold over the people and more power of effectual control, than either Great Britain, France, or any other nation; and there is every reason to believe that happiness is more generally diffused through its population. The British merchant in advocating the necessity

of foreign commerce to the Chinese, seems altogether oblivious that from the immense extent of the Chinese empire, greater than that of the whole of Europe, she necessarily possesses within herself, the varied productions of every soil and climate, and is independent of other nations for whatever claims her necessities or luxuries may require. To put the point in its true light, the British merchant had better boldly assert, that Great Britain wishes or ought to take every possible means, foul or fair, to exhort, persuade, intimidate, compel, the Chinese people to receive her manufactures, *volentes volentes*. But push not the object beyond just and honorable measures. The Chinese nation can far better do without us, than we without them.

I would now wish to canvass the observations regarding the contempt in which foreign commerce is held in China, and consequently the little importance which merchants possess in the eyes of the government. The fault is attributed to monopoly; be it so. But let me ask whether it is not as probable to have arisen from the fact that foreign commerce is of very little utility or importance to the Chinese nation? And, be not startled, my readers, in these days when only one side of a question is tolerated, has it not solely been preserved and rendered firm, by what some term vacillating, others politic, conduct on the part of these said bugbears, monopolists? Was the trade which once existed and flourished in different ports of the Chinese empire, lost through concession, or resistance? The British merchant should be well up in his facts before he finds an argument upon them. From a small stream, originally, the full tide of commerce with China now flows through the arteries of Great Britain; but how has it been nurtured and fed? By monopoly, if a liberal and extended commercial policy can be so termed. Why should not the port of Canton have followed the fate of all other ports, but for the monopoly of the East India company? Look into the annals of commerce with Canton; it has been by opposing in a firm and politic way divers imposts, by breaking the fetters which had already borne to the dust the individual merchant, that this trade was saved at all. It has now attained a height which could scarcely have been contemplated, but which like all other difficult points, when once effected, becomes to men's minds, "simplicity itself." The Chinese in Canton, and provinces adjacent, derive such advantage from the foreign trade, that its cessation would now involve many in ruin; but the government at Peking derives little if any advantage from it. We must be cautious how we conduct it hereafter. Perhaps Great Britain may have been too tamely inclined, recently, to submit to absurd edicts, overflowing with Asiatic hyperbole; but mark, it has been the British government, and not the E. I. company alone, or their servants in China, who have been desirous of continuing one stated routine, when it became no longer necessary. The company have by their monopoly reared a commercial structure of vast consistency and firmness; it remains with their successors to place a dome upon it, or crumble it to the dust. I must say,

that if speculative theories are to rise paramount to solid advantages, the latter fate will speedily await it.

In your strictures on the abasement of foreign commercial character in China, and your desire that it should be duly appreciated, you make a strange observation; namely, that our embassies should not have been even partially composed of men engaged in commerce, as implying a want of knowledge of the character of the Chinese government: surely such an admixture of members of the British factory with high officers of state must have gone far to evince to the Chinese, British ideas of such personages, and have tended to elevate them to their proper station in the eyes of the Chinese authorities. Having blained the E. I. company for succumbing to Chinese opinion, as degrading to commercial dignity, you equally object to so legitimate a means of uplifting it, founded as it is on the usages of our own country. Averse as you are to bestowing a scintilla of credit on monopolists, you must have been ill versed in the history of our embassies, if you are ignorant, that small as the advantage is which we have derived from them, we have been saved from positive evil by this sprinkling of practical and useful men.

The "Bœotian dullness" that would require an island of our own on the coast of China is not quite so apparent to the world at large, as to the circumscribed views of the "merchant." We are not bound to relinquish our trade at Canton because we possess an island; we are not bound to abstain from the same system precisely, as that advocated by the "merchant," because we possess an island; but we have a nucleus wherefrom to radiate into all the eccentric motions of a free trade; in fact the parties who argue against the possession of an island on the coast of China, may perhaps be not altogether disinterested. Warehouses might supersede floating *go-downs*. "Bœotian dullness" may be able to penetrate thus far. "Pandora's box" has still *hope* at the bottom, with its usual attribute of an *anchor*; which may be as heavy to fly as "leadens wings."

I would further add that the British merchant should entertain a rather more modest opinion of his own abilities, than to level so sweeping an accusation of stupidity against those who may be as well, or better able to judge than himself. And may not the charge retort with greater force against the system of powers with which he would propose to invest the chamber of commerce? For merchants to make laws for themselves, to judge of their own acts, and be themselves the official agents between themselves and the local authorities, to erect themselves into a criminal court for the trial of offenses, would be no less anomalous than dangerous to all parties. Merchants, where their own pockets are concerned, would be but indifferent diplomatists, more especially, as most, if not all of us, are daily engaged in contravening the fiscal laws of the empire. I for one would rather our trade were subject to a consular authority in all things, than to so heterogeneous a mass as would collect to rule upon this occasion. It would be worse

than no rule at all. Doubtless we are all "honorable men," but we shall be a little the better for having some restraint on our acts and deeds. A chamber of commerce for all usual and legitimate purposes, or as a counterpoise to the hong merchants, would doubtless be a good institution and ought to be adopted.

Your obedient servant,

Canton, January 22d, 1834.

Another BRITISH MERCHANT.

CHINESE METAL TYPES. We have much pleasure in laying before our readers the following "Brief statement relative to the formation of metal types for the Chinese language." The object and efforts of Mr. Dyer are worthy of all commendation.

MANY arguments have been brought forward to show the disadvantages of metal types for the Chinese language, and their inferiority in appearance to the wooden blocks in common use for printing in China. But these arguments have been fully refuted; and both the utility of the Chinese metal types, and the practicability of making them elegantly, may now be considered as questions entirely set at rest. Hitherto Chinese types have been made only on the imperfect and expensive plan of cutting every character separately on the face of the type metal.

The principal difficulty of procuring Chinese types has hitherto consisted in providing handsome and cheap steel punches, from which copper matrices may be struck, and the type cast. A multitude of calculations have been made of the probable expense of procuring types, according to the respective average price of each punch, as demanded by different individuals. At the lowest price per punch required in England, the cost of punches for a font of 3000 characters in variety, would amount to 30,000 rupees; but cut in India, where work is so much cheaper, the amount would not much exceed 4,000 rupees, as already amply proved by actual experiment. The want, however, of tools and machinery has occasioned many difficulties and delays; and the necessity of acquiring the knowledge of type cutting by much reading and experiment has been the cause of multiplied errors; but by perseverance these have been completely overcome.

Upon the plan of cutting punches for the principal characters in the language first, according to a scale lately made with great accuracy; gradually proceeding from the more to the less important characters; and then supplying the *occasional* characters, by cutting them on the face of the tin or other type metal, *until these also shall be cut in steel*; the font may be very useful when about 1200 punches are cut. And the further we advance in punch cutting, the less need will there be of providing occasional characters in any other way. The average price for which punches can be cut at Penang is not more than 68 cents; and the copper matrices are struck from them for the additional sum of 2½ cents each. Further to reduce the cost, some characters are divided perpendicularly into *halves*, *thirds* and *two-thirds*; and horizontally into *halves*, where such division can be made without affecting the

beauty of the character; by this method, a large number of punches will be saved. Also, when a punch is injured in striking the matrix of any character, it may very frequently, after a little dressing, be used to strike matrices for similar characters of a fewer number of strokes.

About 400 rupees have been subscribed, and nearly 200 punches have been cut: the funds remaining in hand will not admit of much further progress; but the work will proceed just as far as funds are provided. With the requisite funds, about *four* punches could be cut per day, supposing five men to be employed—the agreement with the work-people being to give entire satisfaction in every punch or else to recut the same.

It is worthy of particular notice, that if we could proceed no farther than we have done, a very great object is obtained; for the 200 characters (nearly), which have already been cut are those which most of all are wanted; and they can combine with type made in the common way, viz. by cutting the character on tin. But every contribution of 68 cents will carry us one step farther; and thus we intend (D. V.) progressively to advance, to the number of some thousand punches. Whether our progress be more or less rapid we leave for our friends to determine. It is hoped that all who feel interested about China will help in this work; a most hereulean work, requiring the aid of very many; and a most blessed work, fraught with good to one-third of the human race.

Penang, 31st October, 1833.

SAMUEL DYER.

* * Contributions will be thankfully received by the Editor of the Chinese Repository, Canton; by the principal of the Anglochinese college, Malacca, and by Mr. Dyer, Penang.

RELIGIOUS INTELLIGENCE.

SIAM.—Letters from Bangkok dated on the 22d of September have recently been received from Mr Jones who was still alone in that field of labor. The Rev. Stephen Johnson and family left Singapore for Siam on the 14th of Nov., and returned to the same place on the 31st of December; the vessel in which they embarked having been unable to proceed on her course against the monsoon. The opportunities for correspondence between Singapore and Siam appear to be few. The *Jemsetjee Jeejeebhoy* and three other Surat ships had arrived in June, and were still in Bangkok when Mr. Jones wrote; since their arrival, sugar had risen from 8 to 13 *ticals* (about 62 cents) per *pecul*.

Klin, a young native who was formerly employed as Siamese compositor in the printing office at Singapore, has been for some time past engaged in preparing types from such materials

as that country affords; and he is now making preparations to print the *Siamese history* in 25 vols. The amount of each volume will be the contents of one of the Siamese black books, which are formed of thick paper folded backwards and forwards into from 30 to 35 folds. *Chau-fa-noi*, the king's half brother is also preparing several *peculs* of type for printing.

P'hra Meh-tap the commander-in-chief of the Siamese military forces had gone with a number of vessels for the purpose of removing several thousand more *Cambojans* to Bangkok, so to release them from the terrors they suffer through fear of the *Cochinchinese*." This is a specimen of the manner in which *Cochinchina* and Siam respectively partition *Camboja*, and give protection to its inhabitants! The commander-in-chief returned on the 24th of September, and brought with him about a dozen boats each con-

taining nearly 60 persons, men, women and children. Others were still to follow.

With respect to his own labors and engagements, Mr. Jones says:

"I have from 10 to 30 patients daily. For some my prescriptions have proved successful, so much so that patients have come 15 days journey to consult me. Last Sunday we had more than 20 Chinese; the others were Peguans, Arabs, Burinans, Portuguese, and Laos. I wonder that we have so much success in this business since we know so little about medicine.

"Binty (a Chinese baptized by Mr. Gutzlaff,) and his associates continue their weekly meeting at our house for Christian worship in Chinese: present last Sunday twenty, a greater number than usual. Some of them, so far as I can judge, give pretty good evidence of being true converts. One has solicited baptism; but as I cannot examine or instruct him, I have deferred it. You can hardly imagine how much we need a Chinese missionary, or how much I wish there were here even an interpreter only. They are mostly (to use Mr. Gutzlaff's orthography,) Tio-chew people who visit us, though we have some of almost every dialect.

"At present, we have a good deal of intercourse with the Burmans; I think I have given most of them a general outline of Christianity; but I fear no fruit has yet sprung up. Mrs. J. and I have spent most of to-day among them. I visited their monastery (I can think of no better name); it contains from 40 to 60 priests. In conversing with the head priest, I asked him in what state those who went to *Nigban* (commonly translated annihilation) existed? Holding up his finger, and giving it a puff, he said, 'in just the state of an extinguished candle.'

"Some of the Sianese seem friendly to me, but on what ground, their general character gives room to suspect. I have visited several of the nobility. One of the P'hra-klang's sons has offered to build me a house rent free, if I will come to his neighborhood; but if I were to be houseless till it is done, I fear I should suffer the peltings of many a monsoon."

COCHINCHINA.—Rumors of insurrections and disturbances in Cochinchina still continue to reach us from

various quarters. "The Christians in all the provinces," says the editor of the Singapore Chronicle, in his paper of the 2d ult., "who were protected by *Ta-kong*, (recently an officer of high rank and great influence, but now dead,) and who had nothing to expect from the king but punishment, fled to the fort of Saigon; and 700 of them, at the taking of *Dong-nai*, defended themselves heroically and did great execution among the enemy. *Thay*, (one of the leaders of the insurgents,) sustained all the attacks of the royalists, and even made several very successful sallies. Being as politic as brave, he gained an advantage over his brother-in-law, who commands in Tonquin, and created a division by exciting a rebellion in that quarter. The king was obliged to remove a great part of his troops from the south to the north; but the result is not yet known. There is, however, reason to suppose that the revolt in the north will be more serious than that in the south; and if the communication between the two revolting parties could be effected by sea as well as by land, the king will have much to dread. The centre of Cochinchina is not quiet either; some suspicious, perhaps false, have been attached to the king's brother, and he has been condemned to carry a chain, though he is allowed to remain in his own palace.

"All the Christians are persecuted excessively; and several have been condemned to death. Of this number is Mr. Gagelin, a French missionary who was at Saigon with *Ta-kong* and who was returning to *Hue* to take his leave before departing for Macao. M. Jacard and father Odorico were prisoners at *Hue*, and there are strong reasons for suspecting they have already been executed."

MALACCA.—We have before us several letters and papers from Malacca, some of which are dated as late as the 6th ult.; they afford us a variety of intelligence, especially concerning the college and schools, and encourage us to expect more information from the same sources.

An earthquake occurred at Malacca on the 24th November at half past 8 o'clock P. M. The trembling of the earth continued nearly a minute, and shortly after an indistinct rumbling noise was heard, like distant thunder in the direction of Sumatra. "During

the whole evening," says our correspondent, "there was hardly a breath of air, and just previous to the shock, the atmosphere was sultry and oppressive; and we noticed an unusually thick, smoky sky over the sea, westward; this gradually disappeared after the earthquake and rumbling noise, and the sky became clear and tranquil, and soon a cool land breeze set in, which made the night comfortable. Probably all we have experienced here are but the effects of a sudden eruption of some volcano in Sumatra. Two of our servants who are advanced in years, remember two former earthquakes at Malacca, both more severe than the present.

"Our minds were much awed by this display of the majesty and power of the Almighty. When he arises in his great power, he can make the earth shake and tremble as easily as the leaf is moved by the wind. Some of the Chinese and Malays when they felt the shock, immediately began to pray and call upon their gods with much noise and confusion."

"P. S. On referring to a chart, the only volcano I find laid down in Sumatra is one near to mount Ophir, 150 or 200 miles south-west from Malacca. Probably its renewed heavings and fiery belchings shook the earth and made the hearts of men quake at this remote distance." Shocks were felt at Singapore at the same time as at Malacca.

Our limits allow us room here for

only a remark or two concerning the schools and mission. There are already several schools for boys, and a few for girls; and had the missionaries "*the means*" they could open many more immediately. The Rev. Mr. Tomlin, who for almost two years has been acting for the principal of the Anglo-Chinese college, intends soon to open a new school on an extensive scale, which shall include boys of different nations, such as Chinese, Malay, Portuguese, &c.; it is to be modeled after one of the best and most successful schools in Calcutta. The Rev. J. Evans has entered on his duties in connection with the college. Mr. E., we understand, has for many years been accustomed to the business of education, having, while in England, been professor of the classics, mathematics, Hebrew and Arabic, successively; and trained a number of pupils for Oxford and Cambridge.

BATAVIA.—We are indebted to the kindness of the Rev. Mr. Medhurst, for a copy of the "Report of the Mission station at Batavia for 1833;" and of a "Journal of a voyage from Batavia to Sourabaya and Sumanap on the islands of Java and Madura, during the months of July, August, and September 1833." Copious extracts from both these documents shall appear in our next number; suffice it to remark here, that the mission amidst many discouragements and hindrances is enjoying great prosperity.

JOURNAL OF OCCURRENCES.

CANTON.—Since the 9th inst., this city has presented a scene of festivities, rejoicings, and congratulations which is usual throughout the Chinese empire during the holidays of new year. In the mean time there has been an *unusual* amount of suffering, especially among the lower classes of the inhabitants. Great numbers of the poor, who were rendered houseless and pennyless by the inundation last August, have perished during the winter. No one can describe the wretchedness of some of these sufferers: and none but an eye-witness can conceive of it. Morning after morning, and in the same place, we have seen two three, and four dead bodies; and in the narrow compass of a few rods we have seen at noon-day more than 20

individuals stretched on the ground half naked, and either senseless or writhing in the agonies of death caused by hunger. No man cares for their bodies; none for their souls.

His excellency, *Le-tae-keou*, the literary chancellor of Canton, hung himself in his own house on the morning of the 26th inst. We may give some particulars of the case hereafter.

Banditti have again appeared on the hills at *Leen-chow*, carrying terror and destruction in every direction. Governor Loo has ordered troops and supplies to the field; the result of the expedition is yet unknown in Canton.—We have Peking gazettes to the 2d of December: but they contain nothing of special interest.

